D H E C PROMOTE PROTECT PROSPER	**South Carolina Department of Health and Environmental Control** **Division of Procurement Services** **Invitation for Bid**	Solicitation No.: IFB-32624-12/4/07-EMW Date Issued: 10/30/07 Procurement Officer: E. Madison Winslow Phone No.: (803) 898-3487 E-mail Address: winsloem@dhec.sc.gov

DESCRIPTION: Corrective action for petroleum releases – UST Permit Number 09284, Ft. Mill, SC

The Term "Offer" Means Your "Bid" or "Proposal"

SUBMIT OFFER BY (Opening Date/Time): **December 4, 2007/2:30 pm E.T.**

NUMBER OF COPIES TO BE SUBMITTED: **One (1) original**

QUESTIONS MUST BE RECEIVED BY: **November 20, 2007/2:30 p.m. E.T.** See Specific Requirements, Number 2

SUBMIT YOUR SEALED OFFER TO EITHER OF THE FOLLOWING ADDRESSES:

MAILING ADDRESS:	PHYSICAL ADDRESS:
SC DHEC Division of Procurement Services Bureau of Business Management 2600 Bull Street Columbia, S.C. 29201	SC DHEC Division of Procurement Services Bureau of Business Management 2600 Bull Street, Room 1200 – Aycock Bldg. Columbia, S. C. 29201

Offers Must Be Sealed: See provision entitled "Submitting Your Offer"

AWARD & AMENDMENTS	Award will be posted on or after **December 11, 2007**. The award, this solicitation, and any amendments will be posted at the following web address: http://www.scdhec.net/procurement.

You must submit a signed copy of this form with your offer. By submitting a bid or proposal, you agree to be bound by the terms of the solicitation. You agree to hold your offer open for a minimum of thirty (30) calendar days after the opening date.

NAME OF OFFEROR (Full legal name of business submitting the offer)		OFFEROR'S TYPE OF ENTITY: (Check one) ☐ Sole Proprietorship ☐ Partnership ☐ Corporation (tax-exempt) ☐ Corporate entity (not tax-exempt) ☐ Government entity (federal, state, or local) ☐ Other (See provision entitled "Signing Your Offer")
AUTHORIZED SIGNATURE (Person signing must be authorized to submit binding offer to enter contract on behalf of Offeror named above.)		
TITLE (Business title of person signing above)		
PRINTED NAME (Printed name of person signing above)	DATE	

Instructions regarding offeror's name: Any award issued will be issued to, and the contract will be formed with, the entity identified as the offeror above. An offer may be submitted by only one legal entity. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, *i.e.*, a separate corporation, partnership, sole proprietorship, etc.

OFFEROR'S HOME OFFICE ADDRESS (Address for the offeror's **principal place of business**)			
CITY	STATE	ZIP CODE	
PHONE	FACSIMILE	E-MAIL	
STATE OF INCORPORATION (If offeror is a corporation, identify the state of Incorporation)			
TAXPAYER IDENTIFICATION NO. (See provision entitled Taxpayer Identification Number)			

I. SCOPE OF WORK

A. DEFINITIONS:

For the purposes of this contract the following terms and definitions shall apply:

1. Catastrophic Occurrence: an event (e.g., hurricane) that results in a declared state of emergency and directly and substantially affects the Contractor's operations at a site.
2. Chemicals of Concern: Specific constituents that are identified for monitoring and corrective action.
3. Corrective Action Completion Time: the time in months, estimated by the Contractor, necessary to reduce concentrations of chemicals of concern to site-specific target levels, verify attainment of the goals, and remove or properly abandon assessment and corrective action items (wells, treatment lines, etc.).
4. Corrective Action Plan: A document outlining and detailing proposed corrective actions.
5. Corrective Action System Startup Date: the date on which the Contractor initiates full time treatment operations or initiates injection into or extraction from the subsurface.
6. Site Incentive Period: the period of time in months established by the SCDHEC during which the Contractor must achieve the 100% Concentration Reduction Goal in order to qualify for the Early Completion Incentive.

B. SOLICITATION STATEMENT

The Underground Storage Tank (UST) Program of the South Carolina Department of Health and Environmental Control (SCDHEC) is seeking services to perform active corrective action of petroleum releases at a regulated underground storage tank site in accordance with defined remediation goals. The *objective is to prevent significant further migration and reduce the levels of chemicals of concern (CoC) in the soil and groundwater to or below defined site-specific target levels (SSTLs).* All offerors must be South Carolina Certified Class I Site Rehabilitation Contractors.

C. SCHEDULE OF DELIVERABLES

The following table summarizes the deadlines for deliverables associated with this contract.

DELIVERABLE DUE	DEADLINE
Questions	By 2:30 p.m. ET, 11/20/07
Sealed Bids	By 2:30 p.m. ET, 12/4/07
Corrective Action Plan	30 days from date of award
Performance Bond	30 days from date of award
Initial Monitoring Report	45 days from date of award
CAP Implementation	30 days from Notice to Proceed
System Start Up	15 days from receipt of Permit to Operate and CAP Notice to Proceed
Notify Project Manager of Sampling	At least two (2) weeks prior to the event
Corrective Action Monitoring Report	Quarterly from date of start up
Abandon Monitoring Wells and Corrective Action System	Within 60 days from notice by SCDHEC

D. SITE SPECIFIC INFORMATION

The scope of work defined in this solicitation is to be implemented at:

UST Permit #	Facility Name	Site Address	Date Release Reported
09284	Off Ramp 83	274 S Sutton Rd., Fort Mill, SC	January 7, 1998

II. CONTRACTUAL REQUIREMENTS

A. GENERAL REQUIREMENTS

1. CONTRACT PERIOD: The contract will be effective from date of award until the corrective actions are complete as described in this contract.

2. EQUAL OPPORTUNITY EMPLOYMENT: Contractor must agree to make positive efforts to employ women, other minorities, and minority-owned businesses.

3. AMENDMENTS: All amendments to this solicitation shall be in writing from the SCDHEC Procurement Officer indicated on page one of this solicitation. SCDHEC shall not be legally bound by any amendment, interpretation or settlement that is not in writing.

4. RESTRICTION . . . THE ONLY OFFICIAL CONTACT PERSON AT SCDHEC DURING THE SOLICITATION AND AWARD OF THIS CONTRACT IS THE PROCUREMENT OFFICER INDICATED ON PAGE 1 OF THIS SOLICITATION. OFFERORS ARE NOT TO CONTACT ANY OTHER SCDHEC PERSONNEL LOCATED OUTSIDE THE BUREAU OF BUSINESS MANAGEMENT.

5. AWARD: Award will be made to a South Carolina Certified UST Site Rehabilitation Contractor based on the Grand Total cost, method(s), and Corrective Action Completion Times for all sites listed. For a bid to be considered responsive, the proposed implementation schedule(s) and the proposed remediation technology(ies) or method(s) for active corrective action to achieve the remediation goals must be protective of public health and the environment and be eligible for permitting by SCDHEC. The total cost, methods, and time to complete the contract must be advantageous to the State of South Carolina.

    a. The Corrective Action Completion Times shall be determined by the offeror and entered into the Corrective Action Solicitation Response in Contract Item IV.B.
        i. Time is of the essence in completing the site work to restore the aquifers and protect human health and the environment. Therefore, offerors are encouraged to strive for efficient remediation methods and to propose the shortest practical times for the completion of these sites.
        ii. Award of the contract, if made, will be made to the responsible and qualified offeror who submits the lowest Total amount. In the event that two or more bidders submit the lowest Total amount, the award, if made, will be decided in accordance with the Tie Bids procedure in Section B.(6) of the Underground Storage Tank Environmental Remediation Procedures. Submittal of a "No Bid" for an individual site in this solicitation will be considered non-responsive and will result in rejection of the overall bid.
        iii. The contractor shall enter the number of months in the space provided in Section IV.B and in the Summary Table of the Corrective Action Solicitation Response (IV.C).

6. REASONABLE COST: SCDHEC reserves the right to reject any and all bids that appear to be above the customary and reasonable cost for the same scope of work in a similar geologic setting, that propose technologies that cannot be permitted in South Carolina, or that propose time frames for cleanup that are not protective of human health or the environment.

7. SITE WORK VERIFICATION: The contractor will be required to treat the area where petroleum chemicals of concern (CoC) are above site-specific target levels in the Appendix of this solicitation. Verification that interim corrective action goals have been met will be based upon direct measurements and groundwater quality samples collected from the monitoring wells indicated. Verification that final corrective action goals have been met will be based upon direct measurements and groundwater quality samples from all existing monitoring wells and additional verification wells to be installed at locations and depths designated by SCDHEC (See Contract Item III.B.10 for more details). It is understood that seasonal fluctuations in CoC concentrations will occur over time. It is the intent of this corrective action to prevent further degradation of the aquifer(s) by continued migration of CoC into areas not previously impacted. If the corrective action allows CoC to migrate and impact areas beyond the assessed areas of concern established for any of the sites in this solicitation, the Contractor will be responsible for completing assessment activities necessary to re-define the area of concern and for providing amendments to their Corrective Action Plan addressing the additional impacted areas.

8. REPORTS: Deliver one copy of each plan or report to: SCDHEC, Bureau of Land and Waste Management, UST Program, 2600 Bull Street, Columbia, SC 29201. A minimum of one (1) copy of each plan and one (1) copy of each report must be delivered to the parties listed on the Distribution List included in the appendix. Based on permitting and other requirements, additional copies of plans or reports may be required by the SCDHEC. The SCDHEC will notify the Contractor of the exact number of copies of each document to be submitted.

9. INVOICING: Invoices will be submitted to: SCDHEC, Bureau of Land and Waste Management, UST Program, ATTN: Financial Section, 2600 Bull Street, Columbia, SC 29201, using the SCDHEC's Corrective Action (CA) Invoice form. The initial invoice must be received at the above address within four months of CAP approval or funds will be uncommitted as required by the Section 44-2-40(B) of the SUPERB Act. If funds are uncommitted the submitted invoice will be held until funding is available. **Payment will only be made for achieving the corrective action goals as specified. No partial payments will be made once corrective action is initiated, except as outlined in Contract Item III.B.3.** Payment to the contractor will be a pay for performance system as follows:

   A. Payment of forty percent (40%) of the total corrective action price will be made within 90 days following receipt of an invoice and documentation that the contractor has completed the Corrective Action System Startup. All corrective action activities must be as described in the CAP and are subject to the limitations of Section 44-2-40 of the SUPERB Act. The implementation should be documented in the first corrective action system evaluation (CASE) report. The first CASE report must include the construction logs for all treatment/recovery wells installed in accordance with the CAP.

   B. Payment of forty percent (40%) of the total corrective action price for each site will be made based on achieving interim CoC concentration reduction goals at the site as verified in the monitoring wells listed in the appendix. Payments will be made upon receipt of invoices and documentation that the contractor has achieved interim goals of 60, 90 and 100 percent reduction of total CoC concentration above the SSTLs by the implementation of active corrective action. The CoC concentrations and SSTLs are listed in the respective appendices.

      1. The first concentration reduction goal will be achieved when sixty percent (60%) of the initial CoC concentration above the SSTLs from the monitoring wells specified in the appendix is removed. The following formula will be used to calculate the percent total concentration reduction: total

concentration above SSTLs from initial sampling less total concentration above SSTLs from subsequent sampling divided by total concentration above SSTLs from initial sampling. Payment of fifteen percent (15%) of the total bid price will be made upon verification (see Contract Item III.B.10 for the method of verification) that at least sixty percent (60%)of the total CoC concentration above SSTLs is removed.

The following is an example to demonstrate the CoC Concentration Reduction Calculation:

Well		Benzene	Toluene	Ethylbenzene	Xylene	MTBE	Naphthalene	Conc>SSTL
MW-1	Initial A	7,500	4,000	2,000	15,000	3,000	1,000	A
	SSTL B	10	2,000	1,400	10,000	80	50	B
	Initial > SSTL C	7,490	2,000	600	5,000	2,920	950	18,960 C
	Subsequent D	3,000	1,000	900	13,000	2,000	5	D
	SSTL E	10	2,000	1,400	10,000	80	50	E
	Subsequent > SSTL F	2,990	0	0	3,000	1,920	0	7,910 F
MW-4	Initial G	150	400	50	250	300	25	G
	SSTL H	5	400	50	250	40	25	H
	Initial > SSTL I	145	0	0	0	260	0	405 I
	Subsequent J	100	100	1	1	100	1	J
	SSTL K	5	400	50	250	40	25	K
	Subsequent> SSTL L	95	0	0	0	60	0	155 L
Totals	Initial > SSTL M	(sum of initial concentration above SSTL for all wells) (C+I)						19,365 M
	Subsequent> SSTL N	(sum of subsequent concentration above SSTL for all wells) (F+L)						8,065 N

Notes: If subsequent sampling indicates a CoC concentration at or below the SSTL and/or a CoC concentration at BDL but the reporting limit is at/or below the SSTL value for any constituent, the value for the concentration reduction will be 0 (no negative numbers).

If subsequent sampling indicates a CoC concentration at BDL but the reporting limit is above the SSTL, the value for any constituent will be the analytical reporting limit.

Concentration Reduction Calculation

$$\text{CoC Concentration Reduction} = \frac{(M-N)}{(M)} = \frac{(19{,}365-8{,}065)}{19{,}365} = 0.5835 * 100 = 58.35\% \text{ CoC Reduction}$$

2. The second concentration reduction goal will be achieved when ninety percent (90%) of the initial CoC concentration above the SSTLs from the monitoring wells specified in the appendix is removed. The formula outlined above will be used. Payment of fifteen percent (15%) of the total corrective action price will be made upon verification (see Contract Item III.B.10 for the method of verification) that at least ninety percent (90%) of the total CoC concentration above SSTLs has been removed.

3. The third concentration reduction goal will be achieved when one hundred percent (100%) of the initial CoC concentration above the SSTLs from the monitoring wells specified in the appendix is

removed. The formula outlined above will be used. Payment of ten percent (10%) of the total corrective action price will be made upon verification (see Contract Item III.B.10 for the method of verification) that one hundred percent (100%) of the total CoC concentration above SSTLs has been removed. **Achievement of this goal must be verified by split sampling with the SCDHEC.**

C. The final twenty percent (20%) of the total corrective action price will be paid upon receipt of an invoice and verification that CoC concentrations do not exceed the SSTLs defined in the appendix and SSTLs calculated for any point in the area of concern. Verification that the SSTLs have been achieved will be based upon groundwater quality samples collected from all existing monitoring wells and additional verification wells to be installed at locations and depths designated by SCDHEC (see Contract Item III.B.10 for more details); and 2) all remediation and assessment items (e.g., wells [including pre-existing wells], trenches, etc.) are removed from the site or properly abandoned. The SSTLs are given in the appendices.

10. NOTIFICATION FOR FAILURE TO PERFORM: If the contractor fails during the course of this contract to make reasonable progress toward the cleanup goals or to meet any condition or specification of corrective action as outlined in this document without prior notification to the project manager of circumstances legitimately beyond the control of the contractor, SCDHEC will, on the first occurrence, notify the contractor by certified letter and meet with them to establish a remedy for the deficiency(ies). If the contractor corrects the deficiency(ies) within an agreed to period of time, the corrective action award will continue. If the contractor does not correct the deficiency(ies) within the agreed to period of time, the contractor will be in breach of contract and the corrective action award may be voided by SCDHEC. On the second occurrence, SCDHEC will notify the contractor and their bonding agent or creditor by certified letter and meet with them to establish a remedy for the deficiency(ies). If the contractor corrects the deficiency(ies) within an agreed to period of time, the corrective action award will continue. If the contractor does not correct the deficiency(ies) within the agreed to period of time, the contractor will be in breach of contract and the corrective action award may be voided by SCDHEC. **If the contractor fails on a third occasion during the course of this contract to meet any condition or specification established in this document, the contractor will be in breach of contract and the corrective action award will be voided by SCDHEC.** SCDHEC will notify the contractor and their bonding agent or creditor by certified letter that the corrective action award has been voided and will initiate appropriate actions with the bonding agent. **In the event that the corrective action award is voided due to a breach of contract as outlined above, no further payment of any invoices will be made.** If the corrective action award is voided under the conditions listed above, the contractor will incur a six-month suspension from bidding on any UST-related solicitations in South Carolina and may be subject to suspension or decertification in accordance with the SUPERB Site Rehabilitation and Fund Access Regulations, R.61-98. Any voiding of a corrective action award due to breach of contract will apply only to the site where the deficiency(ies) occurred and will not directly affect other sites awarded in conjunction with this solicitation.

11. CANCELLATION: The accepted corrective action cost will be final and will not be increased or cancelled for any reason (e.g., unanticipated iron fouling of a system, wells clogging because of biological activity or sediments, damage by lightning, increased subcontractor costs, loss of utilities, modification to the system to meet the remediation goals, etc.) with the exception of unforeseen subsurface conditions as determined solely at the discretion of the SCDHEC or identification of additional CoC from a release occurring after the award of this contract that adversely impacts the corrective action. Contractor-owned items used on-site for the contract that are damaged or destroyed by common acts of nature, improper maintenance or handling, theft or vandalism will not be replaced or reimbursed by the SUPERB Account. **Payment will only be made**

for achieving the corrective action goals as specified in this contract. No interim or partial payments will be made once corrective action is initiated, except as outlined as follows. Once site rehabilitation has been initiated under this contract, in the event of a cancellation due to the circumstances prescribed in this condition, final payment will be a percentage of the contract amount equal to the actual percent reduction of the CoC concentration as calculated based on the last sampling results from all wells listed in the Appendix less the amount previously paid. Any action taken by the SCDHEC under this condition that might result in the cancellation of a corrective action award due to circumstances described in this condition will apply only to the affected site and will not directly affect other sites awarded in conjunction with this solicitation.

12. PERFORMANCE BOND: A performance bond, equal to fifty percent (50%) of the award price, will be required by SCDHEC and should be submitted with the CAP. **Bonds must be obtained from a surety that is on the Secretary of the Treasury's list of acceptable sureties for Federal bonds.** The original performance bonds will be submitted to the Bureau of Land and Waste Management, UST Program, Attn: Financial Section, within 30 days of award. The performance bonds will specify that the SUPERB Account will be the recipient of any forfeiture. **The performance bonds must bear the SCDHEC Permit ID Number and the Bid Number.** Since SCDHEC is responsible for disbursement of funds from the SUPERB Account, the bonds will be held by the Bureau of Land and Waste Management, UST Program until the work is successfully completed at each of the awarded sites. **The performance bond must be kept current for the duration of the corrective action. Failure to maintain the performance bonds may result in the corrective action award being voided by SCDHEC in accordance with Contract Item II.A.10.**

B. SPECIFIC REQUIREMENTS

1. CONTRACT SCOPE: This contract is for active corrective action at **one site** in South Carolina.

2. INQUIRIES: Questions or requests for information must be submitted in writing and received by 2:30 P.M. on the date specified in Section I.C of this solicitation. After this date, no further questions will be addressed. A written response will be provided to all requestors of the solicitation. The questions may be faxed to E. Madison Winslow in the SCDHEC Bureau of Business Management at (803) 898-3505.

3. PROVISION FOR EARLY COMPLETION INCENTIVE: The SCDHEC will pay the Contractor an incentive of ten percent (10%) of the Cleanup Cost for early completion, subject to the conditions set forth in this provision. Payment will be made if the remediation goals on a given site have been met in accordance with the terms and conditions of this contract prior to the end of the Site Incentive Period, as established by the SCDHEC, and verified in accordance with Contract Item III.B.10.

   The Site Incentive Period will commence on the Corrective Action System Startup Date. A month starts at 12:00 Midnight on the same day of the month as the Corrective Action System Startup Date and ends at Midnight preceding the same day of the following month. Months will be consecutively counted from the corrective action system startup date. Following system startup at a site, the SCDHEC will provide the Contractor notice in writing of the closing date of the Site Incentive Period for the site.

   The Site Incentive Period will not be adjusted for any reason, cause or circumstance whatsoever, regardless of fault, save and except in the instance of a catastrophic occurrence directly and substantially affecting the Contractor's operations and resulting in unavoidable delay of the cleanup. In the event of a catastrophic occurrence on a specific site, the SCDHEC shall determine the number of months reasonably necessary

and due solely to such catastrophic occurrence to extend the Site Incentive Period. Any amendments to the Site Incentive Period will be provided to the Contractor in writing.

The parties anticipate that routine delays may be caused by or arise from any number of events during the course of site rehabilitation, including, but not limited to, work performed, work deleted, supplemental agreements, delays, disruptions, differing site conditions, utility conflicts, design changes or defects, extra work, right of way issues, permitting issues, actions of suppliers, subcontractors or other contractors, actions by third parties, expansion of the scopes of the projects by the Contractor to make them functional, weather, weekends, holidays, suspensions of the Contractor's operations, or other such events, forces or factors experienced in environmental work. Such delays or events and their potential impacts on performance by the Contractor are specifically contemplated and acknowledged by the Contractor in entering into this Contract, and shall not affect the Site Incentive Periods or incentives set forth above. Further, any and all costs or impacts whatsoever incurred by the Contractor in accelerating the Contractor's work to overcome or absorb such delays or events in an effort to complete the sites within the Site Incentive Periods, regardless of whether the Contractor successfully does so or not, shall be the sole responsibility of the Contractor in every instance.

The Contractor shall have no rights under the Contract to make any claim arising out of this incentive provision except as is expressly set forth in this provision. The Site Incentive Periods for these projects are as follows:

Permit #	Site Name	Site Incentive Period
09284	Off Ramp 83	36 Months

4. SITE SPECIFIC DETAILS: Brief technical summaries of the releases, including location map and specifics of existing wells are attached the appendix The complete technical file will be available for review through the Freedom of Information (FOI) Office located at the Stern Building, 8911 Farrow Road, Columbia, SC. **Offerors are strongly encouraged to review the files to ensure a complete understanding of the project requirements. The successful offeror will be responsible for all information in the technical files.** Appointments to view the technical files may be scheduled on weekdays between the hours of 8:30 A.M. to 5:00 P.M. by calling the SCDHEC Freedom of Information Office at (803) 898-3882. **NOTE: Free-phase product may be present at this site. The application of corrective action technologies or natural fluctuations in the water table can result in the mobilization or possible appearance of free-phase product or elevated CoC concentrations in the monitoring wells.**

III. SPECIFICATIONS for CORRECTIVE ACTION

A. GENERAL SPECIFICATIONS

1. SUBMITTALS: All offerors must meet the following specifications as required by the proposed treatment method(s) or corrective action technology(ies). Submit the Corrective Action Solicitation Response. The response will outline, in general terms, an approach to achieve the remediation goals (e.g., reduction of each CoC to SSTL). The proposal must outline the following:
   a) A description of the proposed treatment method(s) or technology(ies) for corrective action.
   b) The amount of time in months to complete site rehabilitation to meet the remediation goals, install verification wells, and remove or abandon all assessment and remediation items.

c) The total cost (in U.S. dollars) to complete site rehabilitation to meet the remediation goals and to remove or abandon all assessment and remediation items.

2. MINIMUM REQUIREMENTS: Corrective action will be considered complete at the site once the levels of CoC are verified to be at or below the SSTLs listed in the Appendix and SSTLs calculated for any point in the area of concern, and all remediation and assessment items installed by the contractor (e.g., wells [including pre-existing wells], trenches, etc.) are removed or abandoned. See Contract Item III.B.10 for the method of verification. All rehabilitation activities associated with a UST release must be performed by a SCDHEC certified Class I Site Rehabilitation Contractor as required by R.61-98. All corrective action plans and reports must be sealed by a Professional Engineer or Professional Geologist registered in the State of South Carolina. All engineering reports, drawings and plans must be sealed by a Professional Engineer registered in the State of South Carolina. All laboratory analysis for CoC must be performed by a SC certified laboratory. All monitoring, verification, injection, or recovery wells must be installed and abandoned by a SC certified well driller. The corrective action methods or technologies will be designed to prevent vapors from entering onsite or adjacent structures. All applicable certification, training, permits, applications, and fees associated with well installation; injection, discharge, treatment, or transportation of groundwater, air, or soil; construction or operation of a remediation system; and any other action requiring a permit are the responsibility of the contractor. Any required business or occupation license and occupational safety and health training (e.g., OSHA) as defined by the laws and regulations of the United States of America, the State of South Carolina, the county or city is also the responsibility of the contractor. The terms and conditions of all applicable permits will be met. Any contaminated groundwater, soil, or construction material must be properly transported and disposed of, or treated at an approved facility with prior approval from SCDHEC. Any costs for utilities construction and service (electric, telephone, sewer, etc.) required by the corrective action are the responsibility of the contractor.

B. PERFORMANCE REQUIREMENTS

1. CORRECTIVE ACTION PLAN: The successful contractor must complete and submit a detailed Corrective Action Plan in the Appendices within 30 days from the date the Purchase Order is issued by the Bureau of Business Management. Copies of the CAP must be distributed in accordance with Section II.A.8. **NOTE: Use of monitoring well(s) for injection, extraction, or free-phase product recovery purposes is not allowed.** A condition of the CAP may include installation of additional recovery, sparge, compliance, or injection wells. The CAP must define all active (pump and treat, sparge, vapor extraction, excavation of impacted soils, bioremediation, etc.) and passive (intrinsic remediation, monitoring, etc.) corrective action method(s) proposed to reduce CoC to SSTLs. It must be shown, by use of scientific models, computations, or discussion, how each CoC will be reduced to the SSTL for each remediation method proposed for the release. Any assumptions used in a model will be listed or shown, as well as appropriate references. All corrective action will require monitoring to verify remediation. General construction details will be included (e.g., install four additional recovery wells, construct a compliance point, install four air injection wells, excavate 3,000 cubic yards of impacted soils, etc.) as well as details of well abandonment and equipment removal. **The corrective action method(s) or technology(ies) will be designed to prevent vapors from entering onsite or adjacent structures.** A remediation timetable including abandonment of wells and removal of equipment will be included with each CAP. The Bureau of Land and Waste Management, UST Program will review each CAP and initiate a public notice period for a maximum of 30 days. The names and addresses of the owners of all impacted properties and all properties located adjacent to the impacted properties are provided in the appendix. The contractor may be required to attend and provide input at one or more public meetings upon request by SCDHEC. Any CAP amendments and modifications arising from public notice must be submitted

within 15 days of notification by SCDHEC. The CAP and any amendments or modifications must be sealed by a qualified Professional Geologist or Engineer registered in the State of South Carolina. The owner/operator of the site and any other affected property owners will be consulted and will approve the location of the corrective action systems. Permanent systems must be enclosed in fenced areas or small buildings.

2. PERMIT APPLICATIONS: Complete and submit all applications for permits (injection, NPDES, BAQC modeling form, thermal treatment, construction, etc.) with the CAP . All submitted applications must comply with the requirements of the respective permitting program. Any required permit changes or corrections will be submitted within 15 days of notification by SCDHEC.

3. INITIAL MONITORING REPORT: An initial monitoring report documenting CoC concentrations in all wells and potentiometric conditions prior to start up must be submitted to the Bureau of Land and Waste Management, UST Program **within 45 days** after award. Copies of the initial monitoring report must be distributed in accordance with Section II.A.8.

   Based on naturally occurring conditions, the dissolved concentration of petroleum chemicals of concern (CoC) will increase or decrease. For the purposes of this contract, the total CoC concentration for the wells included in the bid package may reasonably increase up to 150 percent or decrease as much as 50 percent. If the total CoC concentration in all wells for any included site increases more than 150 percent based on this initial sampling or if measurable free-phase product that has not been previously documented in any report is detected during the initial sampling event, the contractor may request in writing that the award for that site be canceled. **If either of these conditions occurs, the contractor will contact the UST project manager within two days of problem identification and will submit written documentation within five days of notification.** The contractor will be reimbursed based on the following rate schedule:

Subcontract Costs*	Invoice + 15%
Personnel Mobilization	$ 125.00
Equipment Mobilization	$ 250.00
Groundwater Sample Collection	$ 35.00 each
Gauging Free-phase Product	$ 30.00 per well
Wastewater Disposal	$ 90.00 per drum
CAP Preparation and Assoc. Costs	$6,000.00

* Includes laboratory, drilling, electrical, etc.

The rate schedule above does not apply in the event that the corrective action award is voided due to a breach of contract in accordance with Contract Item II.A.10. The contract will be amended to remove the site in question and the performance bond for that site will be returned to the contractor. If the total CoC concentration in all wells for any included site decreases more than 50 percent based on this initial sampling the SCDHEC may amend the award to remove the site in question. If the contract is amended by SCDHEC to remove a site, the contractor will be notified by certified letter and an invoice for the above outlined items for that site shall be submitted within 20 days from the date of the certified letter. If the corrective action system is started or treatment is performed, the contractor will be required to complete the contract unless circumstances as outlined in Contract Item II.A.11 are encountered. **Once CAP implementation has been initiated under this contract, in the event of a cancellation due to the prescribed circumstances and before any concentration reduction has been achieved, final payment will not exceed 40 percent of the award price under any circumstances as no reduction of CoC concentration has been accomplished.**

4. CORRECTIVE ACTION PLAN IMPLEMENTATION: After completing review of the CAP and all permit applications submitted, the Bureau of Land and Waste Management, UST Program will issue a notice to proceed with CAP implementation. The contractor will implement the CAP within 30 days of receipt of the notice to proceed and any required permit to construct. Disruption to the normal business at the sites will be kept to a minimum. The contractor will repair the site to the condition that existed prior to installation of the corrective action system (e.g., asphalt paved areas will be repaved with asphalt, concrete areas replaced with concrete, grass area will have soil replaced to the original grade and reseeded or sodded with grass, etc.). Upon completion of any required construction, SCDHEC will inspect the system and issue a permit to operate. The contractor will, at all times, keep the sites free from waste materials and rubbish related to the corrective action. Until completion of the corrective action, the contractor will keep the premises in a clean, neat and workmanlike condition satisfactory to SCDHEC. All soil and wastewater generated on site will be removed from the site promptly. Manifests documenting the proper disposal of the soil and wastewater must be included in the appropriate report.

   Implementation of the CAP is not authorized until the contractor receives correspondence from the UST Program indicating that the required public notice period has been successfully completed and all permits have been issued. If premature implementation occurs, the UST Program will not reimburse those costs from the SUPERB Account, and the bid award will be reduced by that amount. If the SCDHEC agrees with early implementation to better protect human health in an emergency and provides approval in writing, early implementation without any reduction to the corrective action amount will be authorized.

5. PROPERTY ACCESS: Gain access to the adjacent properties to sample monitoring wells and to install any corrective action equipment, as required. The contractor will repair the adjacent properties to the conditions that existed prior to installation of the corrective action system (e.g., asphalt paved areas will be repaved with asphalt, concrete areas will be replaced with concrete, grass areas will have soil replaced to the original grade and reseeded or sodded with grass, etc.). The Contractor will be responsible for any equipment/wells installed on adjacent properties. Costs to repair/replace components of the remediation system damaged due to the actions of adjacent property owners cannot be paid by the SUPERB Account.

6. SYSTEM START-UP: The Contractor will initiate system startup within 15 days of receipt of the Permit to Operate, if required. Remediation as defined in the CAP will begin upon system startup. **If any problem with CAP implementation occurs, the contractor will contact the UST project manager within 24 hours of problem identification and will submit written documentation within five days of notification.** ***NOTE: Free-phase product may be present at this site The application of corrective action technologies or natural fluctuations in the water table can result in the mobilization or possible appearance of free-phase product or elevated CoC concentrations in the monitoring wells***

7. REPORTING: Complete and submit a corrective action system evaluation (CASE) report on a quarterly basis. Deliver one copy of each report to: SCDHEC, Bureau of Land and Waste Management, UST Program, 2600 Bull Street, Columbia, SC 29201. A copy of each report in the appendices must be delivered to the parties listed on the Distribution List included in the appendix. The first quarter CASE report is due within 90 days of the permit to operate. The CASE reports must include:

   A. A narrative portion that documents current site conditions, verification of system operation or CAP implementation, and system effectiveness in achieving the remediation goals (e.g., reducing CoC to the SSTLs) as outlined in the CAP. Any system down time and the associated reason(s) will be included in the report.

B. Conclusions and recommendations based on the reported data.

C. Groundwater laboratory analytical data for all monitoring wells in the following format (additional parameters such as dissolved oxygen may be required):

Analytical Data (µg/l)

Monitoring Well	Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Naphthalene
MW-1	7/15/97 10/15/97	145 140	200 190	146 140	1,000 900	170 50	47 165
MW-2	7/15/97 10/15/97	580 480	800 90	300 257	1,000 912	60 50	20 19

D. Groundwater potentiometric data for all monitoring wells in the following format:

Groundwater Data (feet)

Monitoring Well	Date	TOC Elevation	TOC to GW	TOC to FP	FP Thickness	GW Elevation
MW-1	7/15/97 10/15/97	98.0 98.0	17.54 17.90			80.46 80.10
MW-2	7/15/97 10/15/97	100.0 100.0	20.50 21.50	20.47 21.48	0.03 0.02	79.50 78.50

E. A groundwater elevation contour map of the site based on current groundwater potentiometric data.

F. A CoC map based upon current groundwater laboratory analytical data. The groundwater data should be adjacent to the relevant monitoring well using the following format (additional parameters such as dissolved oxygen may be required):

MW - Number
Benzene (µg/l)
Toluene (µg/l)
Ethylbenzene (µg/l)
Xylenes (µg/l)
MTBE (µg/l)
Naphthalene (µg/l)

G. Calculation of CoC concentration reduction as outlined in Contract Item II.A.9.B.1.

H. A copy of the SCDHEC approval letter and manifests for any contaminated soil and groundwater removed from the site for treatment and/or disposal.

l. Additional data required by permits (e.g., air analyses, wastewater effluent analyses and amounts, etc.). The data should be reported on a form or in a format specified in the permits, and attached to the monitoring report as an addendum.

All rehabilitation activities associated with the UST releases must be performed by a SCDHEC Certified Class I Site Rehabilitation Contractor. All air, soil, and groundwater analyses must be performed by a South Carolina certified laboratory. The corrective action monitoring reports must be sealed by a Professional Engineer or Geologist registered in the State of South Carolina. All monitoring wells, water supply wells, and surface water locations associated with each release will be sampled on a quarterly basis for the first year following implementation/system start-up. CASE reports must be submitted in accordance with the established monitoring schedule regardless of the operational status of the corrective action system. Thereafter, the number of monitoring wells sampled may be reduced or the interval between CASE reports may be lengthened upon clear demonstration of CoC reduction, unless restricted by permit requirements. Approval of any reduction in the number of wells to be sampled or change in the interval between submittal of CASE reports is at the sole discretion of SCDHEC. Any approval to reduce the number of wells sampled or the frequency of sampling must be in writing from the UST Program. SCDHEC may require data to be reported on a form or in a specific format. The contractor will be provided with the proper report forms and format prior to system startup. The contractor will be notified of any revisions to the report forms or format 90 days prior to the due date for the next CASE report.

8. GROUNDWATER & ADDITIONAL SAMPLING: Collect one (1) water sample per monitoring event for all monitoring wells, water supply wells, and surface water locations associated with the release (see Appendix). If free-phase product appears that was not documented in the baseline data, the thickness of product and depth to groundwater must be recorded to the nearest 0.01 foot. If required, the well shall be purged prior to sampling and pH, temperature, dissolved oxygen, and specific conductance recorded. For those monitoring wells where the water level is within the screened interval, groundwater samples should be collected without purging. For those monitoring wells where the water level is not within the screened interval, purging must be conducted. All water supply wells must be purged prior to sampling. Purging is considered complete once three well volumes have been removed or the pH, temperature, dissolved oxygen, and specific conductance have equilibrated, yielding two consecutive readings with all parameters within ±10 percent, whichever comes first. Sampling logs should note all field measurements, as well as the location and type of each sample submitted for laboratory analysis. Each groundwater sample will be collected in accordance with established QA/QC protocol and submitted to a certified laboratory for analysis. The samples must be analyzed for the parameters listed in the appendix.

   Additional samples (air, groundwater, effluent, soil) required by permits must be collected in accordance with established QA/QC protocol and submitted to a certified laboratory for analysis. The samples will be analyzed for parameters stipulated in the permits. Sampling and analytical data for each sample (e.g., field sampling logs, chain of custody forms, certificates of analysis, and the lab certification number) will be included in the CASE report.

9. DISPOSAL: Properly dispose of all contaminated soil and groundwater generated during the implementation of the CAP and installation of verification wells. The disposal facility selected for treatment and disposal of any contaminated soil and groundwater must be a SCDHEC-approved facility. The owner/operator of the UST facility is considered the generator for any contaminated soil and groundwater. The contractor must document disposal of contaminated soil and groundwater in the CASE reports.

10. QUALITY ASSURANCE: If the remediation technology is in-situ (e.g., pump and treat, air sparging, vapor extraction): suspend operation of the system once the remediation goals for all CoC have been maintained for a period of 30 days. Samples are to be taken one (1) quarter after the date established by the SCDHEC as the start of the post-remediation verification period and again after a second quarter. Along with the parameters listed in the appendix , the groundwater samples should also be analyzed for the following parameters:

Analyte	Analytical Method*	Reporting Limit (µg/l)
Dissolved Oxygen	SM4500-O G	500
Ferrous Iron	SM3500-Fe D	30
Methane	Kerr	1000
Nitrate	9056/9210	100
Sulfate	9038/9056	1000

*or EPA equivalent method that can achieve the same reporting level

If sample results indicate that the remediation goals are not sustained, the contractor must submit a corrective action status report (3 copies) that outlines the deficiency(ies) and offers recommendations for achieving the remediation goals with a revised timetable. Modifying and restarting of the system may be necessary. All remediation goals must be again maintained for a minimum of 30 days. Corrective action will then be suspended again and samples taken to verify that remediation goals are sustained. This cycle of activity, including status reports, will be repeated until all CoC levels remain below SSTLs for all wells listed in the appendix for two (2) consecutive quarters. Verification wells may be installed at locations and depths designated by SCDHEC (See Appendices for number of verification wells). Costs for verification well installation are considered part of the Cleanup Cost. Each well will be sampled in accordance with Contract Item III.B.8 and the analyses compared to the calculated SSTLs for the CoC at that well location. If the laboratory analyses are at or below the SSTLs, corrective action will be considered complete. If any analyte is above the SSTL, the corrective action will not be considered complete, and the activity cycle described above must be repeated until all CoC levels remain below SSTLs for those wells listed in the appendix for that site. Split or duplicate samples may be collected by SCDHEC (or its subcontractors) to verify achievement of remediation goals. In addition to the groundwater collected from the monitoring wells, the UST Program may provide up to three standards or prepared blanks for the contractor's laboratory to analyze. The laboratory analysis from the contractor's and the UST Program's laboratory will be compared. In the event of substantial variance (more than 15%), a second sampling event with field and trip blanks will be sent to a SC certified laboratory by the UST Program for analysis. The contractor will be notified when the wells will be resampled, can observe this second sampling event, and will be provided analytical results for comment. SCDHEC Laboratory Certification will be provided copies of all sample data sets with all relevant quality assurance/quality control data to assist the UST program in determining the cause of a laboratory variation. The Director of the Assessment and Corrective Action Division will make the final decision on which analytical values will be the basis for payment or closure with input from the site rehabilitation contractor, SCDHEC Laboratory Certification, the UST Section Manager, and the UST Project Manager. The site rehabilitation contractor will be provided a written record of any decision. **At least two weeks notice will be provided to the UST Project Manager prior to mobilizing to the site for sampling to verify attainment of remediation**

goals. Costs for transportation and analysis of split or duplicate samples will be paid by SCDHEC.

11. DEMOBILIZATION: Disassemble and remove the remediation system and all associated remediation items including utilities from the site within 60 days of notification by SCDHEC that the remediation goal for the release associated with the UST(s) at the site has been achieved. Disruption to the site's normal business will be kept to a minimum.

12. SITE RESTORATION: Properly abandon all monitoring, recovery, and/or injection wells (including pre-existing wells), borings, trenches, and piping/utility runs installed by the contractor as part of corrective action within 60 days of notification by SCDHEC that the remediation goal for the release associated with the UST(s) at the site has been achieved. The abandonment will be in accordance with South Carolina Well Standards and Regulations R. 61-71 and accepted industry standards for abandonment of trenches and piping/utility runs. Disruption to the property owner's normal business will be kept to a minimum. The contractor must notify SCDHEC of the method of well abandonment and final disposal of any contaminated soil or groundwater. The contractor will return the site to the condition prior to corrective action (e.g., asphalt paved areas will be repaved with asphalt, concrete areas will be replaced with concrete, grass areas will have soil replaced to the original grade and reseeded or sodded with grass, etc.).

13. COMPLETION NOTICE: The Contractor shall provide the SCDHEC with written notice at least two weeks prior to Completion. This will allow the Project Manager and Contractor time to jointly inspect the project and, if necessary, make a Completion Punch List of work to be finished. Items on the Punch List may include, but are not limited to well abandonment, pavement repair, debris removal, etc. The date of Completion will be determined by the Project Manager when all Punch List work is completed.

14. MISCELLANEOUS ITEM: Corrective action activities were previously conducted at the facility. Included in the appendices is information pertaining to the corrective action system still in place. The contractor awarded this site may utilize the existing equipment, sparge wells, injection wells, etc. upon receiving any necessary approvals. The contractor will become responsible for the equipment, wells, etc. and will be included in Items III.B.11 and III.B.12.

IV. BID AWARD

A. ACCEPTANCE and DELIVERY STATEMENT

In compliance with the solicitation and subject to all conditions thereof, the offeror agrees, if this bid is accepted within _____ days from date of opening, to complete the corrective action as specified at the prices set forth for all sites as stated below.

For the purpose of this submittal and acceptance of financial approval should it occur, I certify that this company understands the nature of the releases and the geologic conditions at these sites as documented in the technical files and this solicitation. **Any quantities listed in the corrective action method(s) below are estimates and changes to those quantities or to the listed method(s) will not affect the bid price.** Additionally, I certify that this company understands that acceptance is based on total cost to treat the areas of concern.

_____ Certification No. _____

Contractor (Print)

_____ _____

Authorized Representative (Print) Signature

B. CORRECTIVE ACTION SOLICITATION RESPONSE

Please respond to the following questions for Off Ramp 83, 274 S Sutton Rd., Fort Mill, SC, 29715:

1. The corrective action method(s) or technology(ies) that will be proposed in the CAP will be:

   _____

   _____

   _____

2. The Corrective Action Completion Time, in months, to complete the corrective action from the date of corrective action system startup until corrective action goals are met is _____ months.

3. The Corrective Action Cost, in whole dollars, regardless of the type, quantity, or duration of the permitted technology applied, to treat the area of concern (see Attachment A, Figure 2) such that the levels of CoC do not exceed the site-specific target levels (SSTLs) defined in Contract Item II.A.9.C at any point, complete all associated monitoring and post-remediation verification, prepare all plans, reports, and correspondence; obtain and meet all terms and conditions of all required permits and licenses; design, install, monitor, operate, maintain, and when completed, properly abandon or remove all assessment and remediation items installed as part of corrective action; provide evidence of performance bond; and other items outlined in this solicitation is:
   $_____

C. BID SCHEDULE SUMMARY TABLE

SITE(ID #)	FACILITY NAME	CORRECTIVE ACTION COMPLETION TIME (months)	CORRECTIVE ACTION COST
09284	Off Ramp 83		

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL

BID NUMBER: IFB-32624-12/4/07-EMW

PLEASE READ THE FOLLOWING CAREFULLY PRIOR TO COMPLETING BID

INSTRUCTIONS TO BIDDERS

DISCUSSIONS AND NEGOTIATIONS: By submission of a bid, bidder agrees that during the period following issuance of this solicitation and prior to notification of intent or award of a contract, the bidder shall not discuss this procurement with any party except members of the DHEC Procurement Division or other parties designated in this solicitation. Bidder shall not discuss or attempt to negotiate with the using area or program any aspects of the procurement without prior approval of the DHEC Procurement Division Buyer responsible for the procurement. Infractions may result in rejection of the violator's bid.

1. Unless otherwise required herein, only one signed copy of the invitation to bid is required.
2. Bids "faxed" directly to the DHEC Procurement Office will not be accepted or considered for award.
3. Bids, amendments thereto or withdrawal request must be received by the time advertised for bid opening. It is the bidder's sole responsibility to insure that these documents are received by the person (or office) at the time indicated in this solicitation document. DHEC Underground Storage Tank Environmental Remediation Procedures shall govern any withdrawal request received after the time of the bid opening.
4. When specifications or descriptive papers are submitted with the bid submission, enter bidder's name thereon.
5. Submit your signed bid on this form. Show the bid number on the envelope as instructed. DHEC assumes no responsibility for unmarked or improperly marked envelopes. All envelopes received showing a bid number are placed directly under locked security until the date and time of opening. Do not include more than one bid invitation per envelope. If directing any other correspondence, address the envelope to the Procurement Officer but do not include the bid number on the envelope since it does not include your bid.
6. Bidders must clearly mark as "CONFIDENTIAL" each part of their bid which they consider to be proprietary information that could be **exempt from disclosure** under Section 30-4-40, Code of Laws of South Carolina 1976 (1986 Cum. Supp.; Freedom of Information Act). If any part is designated as confidential, there must be attached to that part an explanation of how this information fits within one or more categories listed in Section 30-4-40. DHEC reserves the right to determine whether this information should be exempt from disclosure and no legal action may be brought against the State, DHEC or its agents for its determination in this regard.
7. By submission of a bid, **you are guaranteeing** that all goods and services meet the requirements of this solicitation during the contract period.
8. **Tie bids** will be resolved as outlined in DHEC Underground Storage Tank Environmental Remediation Procedures.
9. **Do not include any taxes** that DHEC may be required to pay in the bid price. Upon submission of a bid by a state agency, the Procurement Officer will compute a 5% sales and use tax to the non-state agency bids when applicable (service and labor excluded) in determining the low bidder. This procedure conforms to the SC Tax Commission Sales and Use Tax Regulation 117-174-.95.
10. **Correction of errors on this bid form:** All prices and notations should be printed in ink or typewritten. Errors should be crossed out, corrections entered and initialed by the person signing the bid. Erasures or use of typewriter correction fluid may be cause for rejection. No bid shall be altered or amended after the time specified for the bid opening.
11. **Ambiguous bids** that are uncertain as to terms, delivery, quantity, or compliance with this solicitation may be rejected or otherwise disregarded.
12. Any bidder desiring to exercise a grievance may do so under section IV of DHEC Underground Storage Tank Environmental Remediation Procedures. All correspondence should be directed to the Director of Procurement Services, Bureau of Business Management, 2600 Bull Street, Columbia, SC 29201.
13. **Failure to respond** to three consecutive bid notices may result in removal of bidder's name from the mailing list.

GENERAL PROVISIONS

14. DHEC reserves the right to reject any and all bids, and to cancel this solicitation.
15. **Unit prices** will govern over extended prices unless otherwise stated in this solicitation.
16. **Prohibition of Gratuities:** Amended section 8-13-420 of the 1976 Code of Laws of South Carolina States: "Whoever gives or offers to any public official or public employee any compensation, including a promise of future employment, to influence his action, vote, opinion or judgment as a public official or public employee or such public official solicits or accepts such compensation to influence his action, vote, opinion or judgment shall be subject to the punishment as provided by Section 16-9-210 and Section 16-9-220. The provisions of this section shall not apply to political contributions unless such contributions are conditioned upon the performance of specific actions of the person accepting such contribution nor shall they prohibit a parent, grand-parent or relative from making a gift to a child, grandchild, or other close relative for love and affection except as hereafter provided".
17. **Bidder's Qualification:** Bidders must, upon request of DHEC, furnish satisfactory evidence of their ability to furnish products or services in accordance with the terms and conditions of these specifications. DHEC reserves the right to make the final determination as to the bidder's ability to provide the products or services requested herein.
18. **Bidder's Responsibility:** Each bidder shall fully acquaint himself with conditions relating to the scope and restrictions attending the execution of the work under the conditions of this solicitation. It is expected that this will sometimes require on-site observation. The failure or omission of a bidder to acquaint himself with existing conditions shall in no way relieve him of any obligation with respect to this bid or to the subsequent contract.

19. **Amendments:** All amendments to and interpretations of this solicitation shall be in writing from the DHEC Procurement Office. Neither DHEC nor the Procurement Officer shall be legally bound by any amendment or interpretation that is not in writing.

20. **Award Criteria:** Award shall be as indicated herein to the lowest responsible and responsive bidder whose bid meets the requirements and criteria set forth in this solicitation. Award may take longer than fourteen days. A copy of the award notice should be posted on Procurement Services' website at: dhec.sc.gov/procurement.

21. **Rejection:** DHEC reserves the right to reject any bid that contains prices for individual items or services that are unreasonable when compared to the same or other bids if the rejection is in the best interest of the State.

22. **Competition:** This solicitation is intended to promote competition. If the language, specifications, terms and conditions, or any combination thereof restricts or limits the requirements in this solicitation to a single source, it shall be the responsibility of the interested bidders to notify the DHEC Procurement Office in writing so as to be received five days prior to the opening date. Notification may be "faxed" to the DHEC Procurement Office, (803) 898-3505. The solicitation may or may not be changed but a review of such notification will be made prior to award.

23. **Order of Precedence:** In the event of inconsistency between provisions of this solicitation, the inconsistency shall be resolved by giving precedence in the following order; (A) the bidding schedule, (B) the specifications, (C) general conditions, (D) special provisions or special conditions of the contract whether incorporated by reference or otherwise, and (E) instruction to bidders.

GENERAL CONDITIONS

24. **Contract Administration:** Questions or problems arising after award of this solicitation/contract shall be directed to the DHEC Procurement Office, 2600 Bull Street, Columbia, SC, 29201. Reference the solicitation and contract number.

25. **Default:** In case of default by the contractor, DHEC reserves the right to purchase any or all items in default in the open market, charging the contractor with any additional costs. The defaulting contractor shall not be considered a responsible bidder until the assessed charge has been satisfied.

26. **Save Harmless:** (This General Condition does not apply to solicitations for service requirements). The successful bidder shall indemnify and save harmless the State of South Carolina and DHEC and all its officers, agents and employees from all suits or claims of any character brought by reason of infringing on any patent, trade mark or copyright. The bidder shall have no liability to DHEC if such patent, trademark or copyright infringement or claim is based upon the bidder's use of material furnished to the bidder by the State.

27. **Publicity Releases:** By submission of a bid, the contractor agrees not to refer to award of this contract in commercial advertising in such a manner as to state or imply that the products or services provided are endorsed or preferred by DHEC or user.

28. **Tax Credit Availability:** Bidders interested in income tax credit availability by subcontracting with Certified Minority Firms should contact the Office of Minority Business Assistance, 1205 Pendleton Street, Columbia, SC, 29201. (803-734-0562)

29. **Affirmative Action:** The successful bidder will take affirmative action in complying with all Federal and State requirements concerning fair employment and employment of the handicapped, and concerning the treatment of all employees, without regard or discrimination by reason of race, color, religion, sex, national origin or physical handicap.

30. **Assignment:** Unless otherwise indicated in this solicitation, no contract or its provisions may be assigned, sublet, subcontracted, or transferred without the prior written consent of the DHEC Procurement Office.

31. **Termination:** Any contract resulting from this solicitation may be terminated by DHEC by providing a thirty-day advance notice in writing to the successful contractor.

32. **Non-Appropriations:** Any contract entered into by DHEC resulting from this solicitation shall be subject to cancellation without damages or further obligation when funds are not appropriated or otherwise made available to support continuation of performance in a subsequent fiscal period or appropriated year.

33. **Convenience:** In the event that this contract is terminated or canceled upon request and for the convenience of DHEC without the required thirty days advance written notification, then DHEC shall negotiate reasonable applicable termination costs.

34. **Cause:** Any contract resulting from this solicitation may be terminated without advance notice by DHEC for cause, default or negligence on the part of the successful contractor.

35. **S.C. Law Clause:** Upon award of a contract under this bid, the person/partnership, association or corporation to whom the award is made must comply with the laws of South Carolina which require such person or entity to be authorized and/or licensed to do business with this State. Notwithstanding the fact that applicable statutes may exempt or exclude the successful bidder from requirements that it be authorized and/or licensed to do business in this State. By submission of a bid, the bidder agrees to subject himself to the jurisdiction and process of the courts of the State of South Carolina as to all matters and disputes arising or to arise under the contract and the performance thereof, including any questions as to the liability for taxes, licenses or fees levied by the State of South Carolina.

36. **Quality of Product:** (This general condition does not apply to solicitations for printing or service requirements.) Unless otherwise indicated in this solicitation, it is understood and agreed that any item offered or shipped as a result of this solicitation shall be new and in first class condition, that all containers shall be new and suitable for storage or shipment, and that prices include standard commercial packaging. If items that are other than new (i.e., remanufactured or refurbished) are desired to be bid, the bidder must obtain written permission to bid such items at least five days in advance of the bid opening date. Written permission must be obtained from the DHEC Procurement Office.

37. **Compliance with Federal Requirements:** S.C. State or Federal requirements that are more restrictive shall be followed in bidding, awarding and performance of this contract.

38. **Drug-Free Workplace:** Required by Section 44-107-10 (Drug Free Work-Place Act) of the SC Code of Laws, 1976, as amended. By submission of a bid, the bidder certifies that he will comply with all aspects of the Drug-Free Workplace Act and will not engage in the unlawful manufacture, distribution, dispensation, possession or use of a controlled substance in the performance of this contract. This certification also applies to any individual or firm employed by the contractor.

39. **Confidentiality Policy:** The successful contractor agrees to abide by DHEC's policy of confidentiality which states in part that all information as to personal facts and circumstances given or made available to employees and/or contractors of DHEC in administration of programs shall be held confidential and shall not be divulged without the express written consent of the individual(s) to which it pertains.

40. **Item Substitution:** No substitution of items will be allowed on any purchase made from the awarded contract without written permission from the DHEC Procurement Office.

41. **Outside Contractor Program:** If applicable to scope of contract, contracted employees working on DHEC properties are entitled to information about hazardous chemicals present at DHEC; and DHEC's personnel are entitled to information about hazardous chemicals brought to the facilities by contractors. In order to assure continued compliance with the Hazard Communication Standards while contractors are on DHEC property and to control potential compliance obligations under the Superfund Amendments and Re-authorization Act, it is DHEC's policy to:

A. Obtain written assurance that the contractor's employees have been trained to understand the hazards of the chemicals at DHEC and how to use appropriate personal protective equipment. All personal protective equipment and training required for the contractor's employees will be provided by the contractor at the contractor's expense. (This includes SC State General Services employees).

B. Require the contractor to notify the DHEC Bureau of Business Management or the appropriate DHEC unit Director when introducing hazardous chemicals into DHEC work areas, which may harmfully expose DHEC employees. If the contractor is introducing such hazardous chemicals into any DHEC facility or onto DHEC property, the contractor shall provide the DHEC Division of Procurement Services or the DHEC unit Director copies of the Material Safety Data Sheets (MSDS) for those chemicals. The DHEC Division of Procurement Services or the DHEC unit Director should provide appropriate information to the DHEC employees before the contractor(s) enter any DHEC facility with chemicals.

C. DHEC reserves the right to refuse to allow any contractor to bring any chemical onto DHEC property. The Department also reserves the right to refuse to allow any contractor to bring certain quantities of chemicals on DHEC property.

APPENDIX

Distribution List
Table of Current CoC Concentrations in Groundwater
Table of SSTLs
Table of Analytical Parameters
Verification Well Information
UST Program Project Manager Information

Distribution List for Plans and Reports

Site: Carl Catoe Construction Inc., 1663 Katy Ln., Fort Mill, SC, 29708

Westerly Hills Baptist Church, 1730 Doves Road, Fort Mill, 29715

Lee Oates and Dena Hughes, 1762 Country Lodge Rd, Fort Mill, 29715

Cheryl Howell, 266 S. Sutton Rd., Fort Mill, SC, 29715

Robert and Helen Rabon, PO Box 1505, Fort Mill, SC, 29715

Kenneth Baker, PO Box 2649, Batesburg-Leesville, SC, 29070

Willie Worley, 1815 Grady Hope Rd., Fort Mill, SC, 29715

Rafael Echevarria & Lillian J Cudrado, 265 S. Sutton Rd., Fort Mill, SC, 29715

Thomas Blanks, 275 S. Sutton Rd., Fort Mill, SC, 29715

Randall & Maura Kelly, 281 S. Sutton Rd., Fort Mill, SC, 29715

Table of Current CoC Concentrations in Groundwater

CoC concentrations requiring reduction in parts per billion (µg/l) based on August 21, 2007 sampling:

Well	Benzene	Toluene	Ethylbenzene	Xylene	Naphth.	MtBE	EDB	1,2-DCA	Total
MW-1	2	<1	<1	<3	<1	<1	<0.02	<1	
MW-1R	<1	<1	<1	<3	<1	<1	<0.02	<1	
MW-2R	**3,400**	**25,100**	**1,630**	**11,330**	**822**	**<5**	**0.98**	**<5**	**42,292.98**
MW-3R	**17,800**	**<10**	**1,570**	**12,060**	**1,070**	**588**	**155**	**571**	**33,824.00**
MW-4	<1	<1	<1	<3	<1	<1	<0.02	<1	
MW-5	<1	<1	<1	<3	<1	<1	<0.02	<1	
MW-6	<1	<1	<1	<3	<1	<1	<0.02	<1	
MW-7	**754**	**20**	**9**	**749**	**278**	**<1**	**<0.02**	**<1**	**1,812.02**
MW-8	**350**	**363**	**781**	**8,950**	**1,450**	**<5**	**0.07**	**22**	**11,921.07**
MW-9	<1	<1	<1	<3	<1	<1	<0.02	<1	
MW-10	<1	<1	<1	<3	<1	<1	<0.02	<1	
MW-11	<1	<1	<1	<3	<1	<1	<0.02	<1	
MW-12	<1	<1	<1	<3	<1	<1	<0.02	<1	
MW-13	<1	<1	<1	<3	<1	<1	<0.02	<1	
WSW-Towery	<1	<1	<1	<3	<1	<1	<0.02	<1	
Initial	22,304	25,493	3,990	33,089	3,620	599	156.07	599	89,850.07
SSTL	879	25,493	3,990	33,089	1,083	599	0.50	373	65,506.50
Initial > SSTL	21,425	0	0	0	2,537	0	155.57	226	24,343.57

* CoC concentations may vary due to seasonal fluctuations in the groundwater.
# CoC concentrations will be set at the levels detected after the removal of Free Phase Product

Table of SSTLs

Site-specific target levels (SSTLs) for interim payment under this solicitation in parts per billion (µg/l).

Well	Benzene	Toluene	Ethylbenzene	Xylene	Naphth.	MtBE	EDB	1,2-DCA
MW-2R	202	25,100*	1,630*	11,330*	258	5**	0.19	5**
MW-3R	225	10**	1,570*	12,060*	275	588*	0.22	345
MW-7	202	20*	9*	749*	258	1**	0.02**	1**
MW-8	250	363*	781*	8,950*	292	5**	0.07*	22*
Total	879	25,493	3,990	33,089	1,083	599	0.50	373

* Laboratory analysis is less than calculated SSTL. SSTL is set equal to laboratory analysis.
** Laboratory analysis is below detection limit. SSTL is set equal to detection limit.

Table of Analytical Parameters

Analyte	Analytical Method*	Reporting Limit
BTEX*	8260B	5 µg/l
Naphthalene*	8260B	5 µg/l
MTBE*	8260B	5 µg/l
EDB	8011	0.05 µg/l
1,2-DCA	8260	5 µg/l

* The Bureau of Land and Waste Management UST Program no longer accepts equivalent analytical methods for VOC analysis.

The above analyses are required for quarterly sampling.

Verification Wells

Two verification well(s) may be installed during the post-corrective action monitoring period at locations designated by the UST Program. Costs for the well installation are considered part of the approved Corrective Action Cost. The Program will calculate SSTLs for the verification well(s) and provide the data to the Contractor in writing. During verification, all wells must be sampled for the parameters listed above as well as the following parameters.

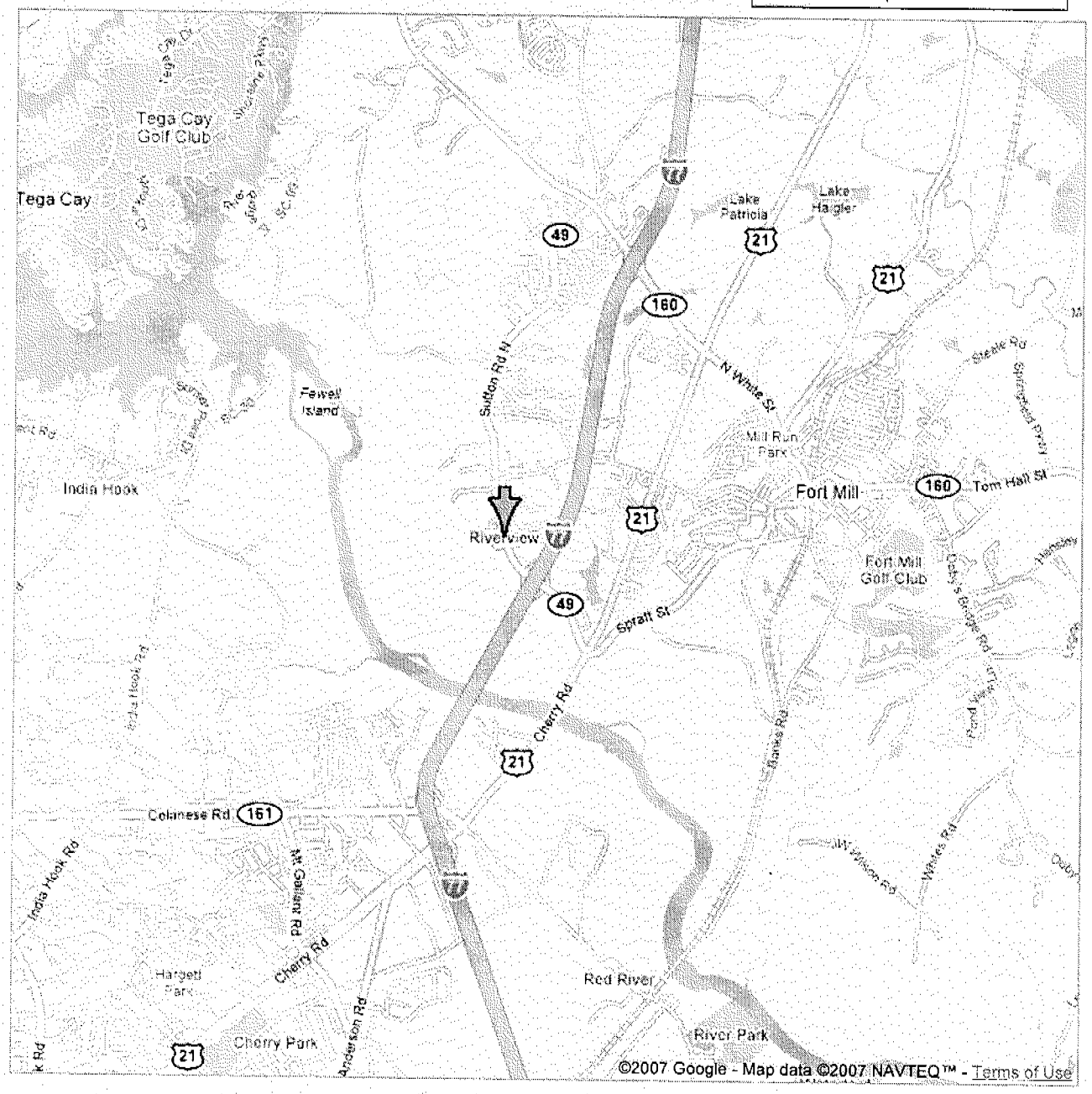
Analyte	Analytical Method*	Reporting Limit
Dissolved Oxygen	SM4500-O G	500 µg/l
Ferrous Iron	SM3500-Fe D	30 µg/l
Methane	Kerr Method	1 mg/l
Nitrate	9056/9210	100 µg/l
Sulfate	9038/9056	1000 µg/l

Project Manager: Debra Thoma

Site Location Map
Site Map
Potentiometric Map
Geological Cross Sections

Google Maps

Address **274 Sutton Rd S**
Fort Mill, SC 29715



SCDHEC
IFB-32624-12/4/07-EMW
Page: 26

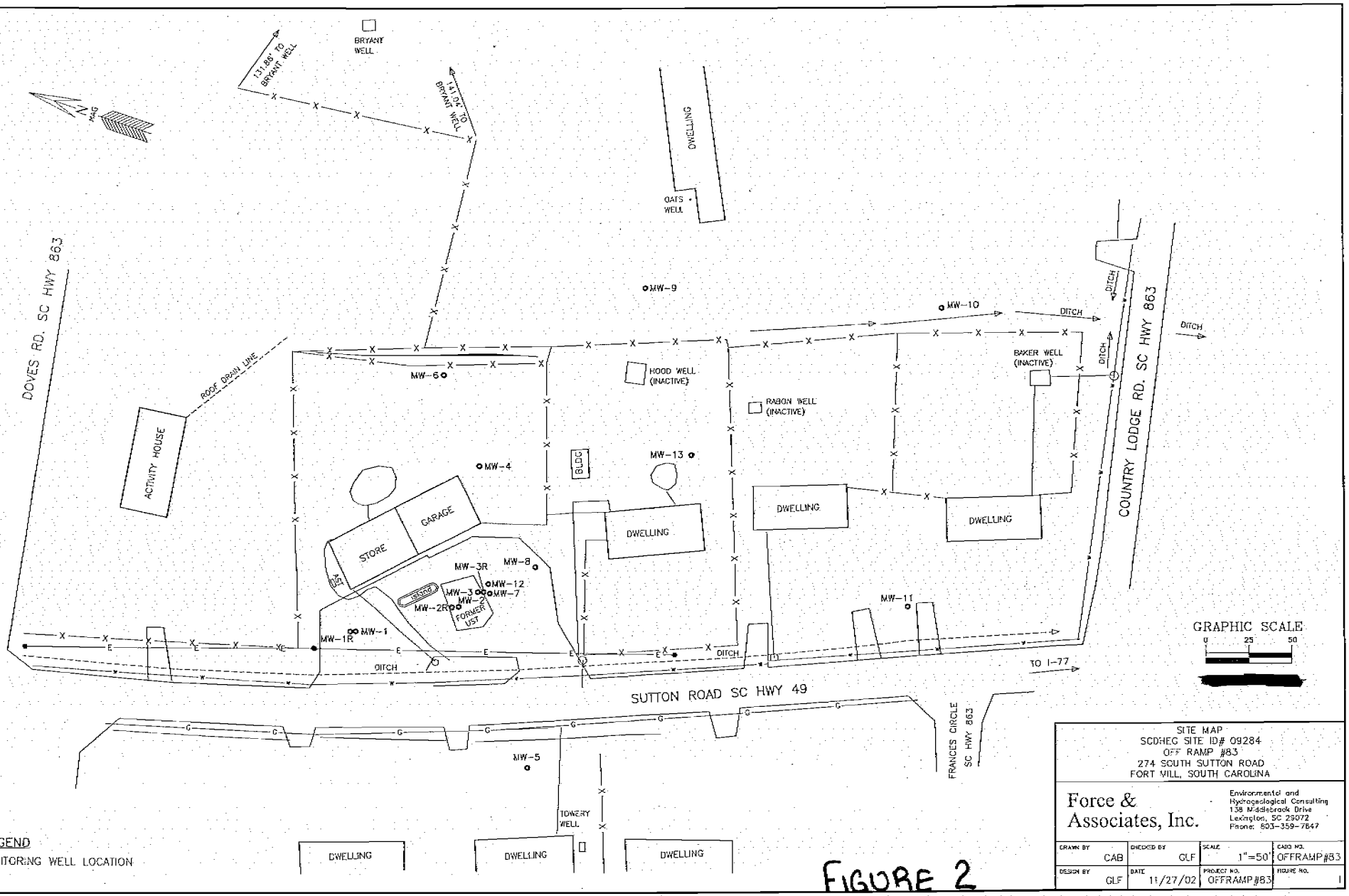


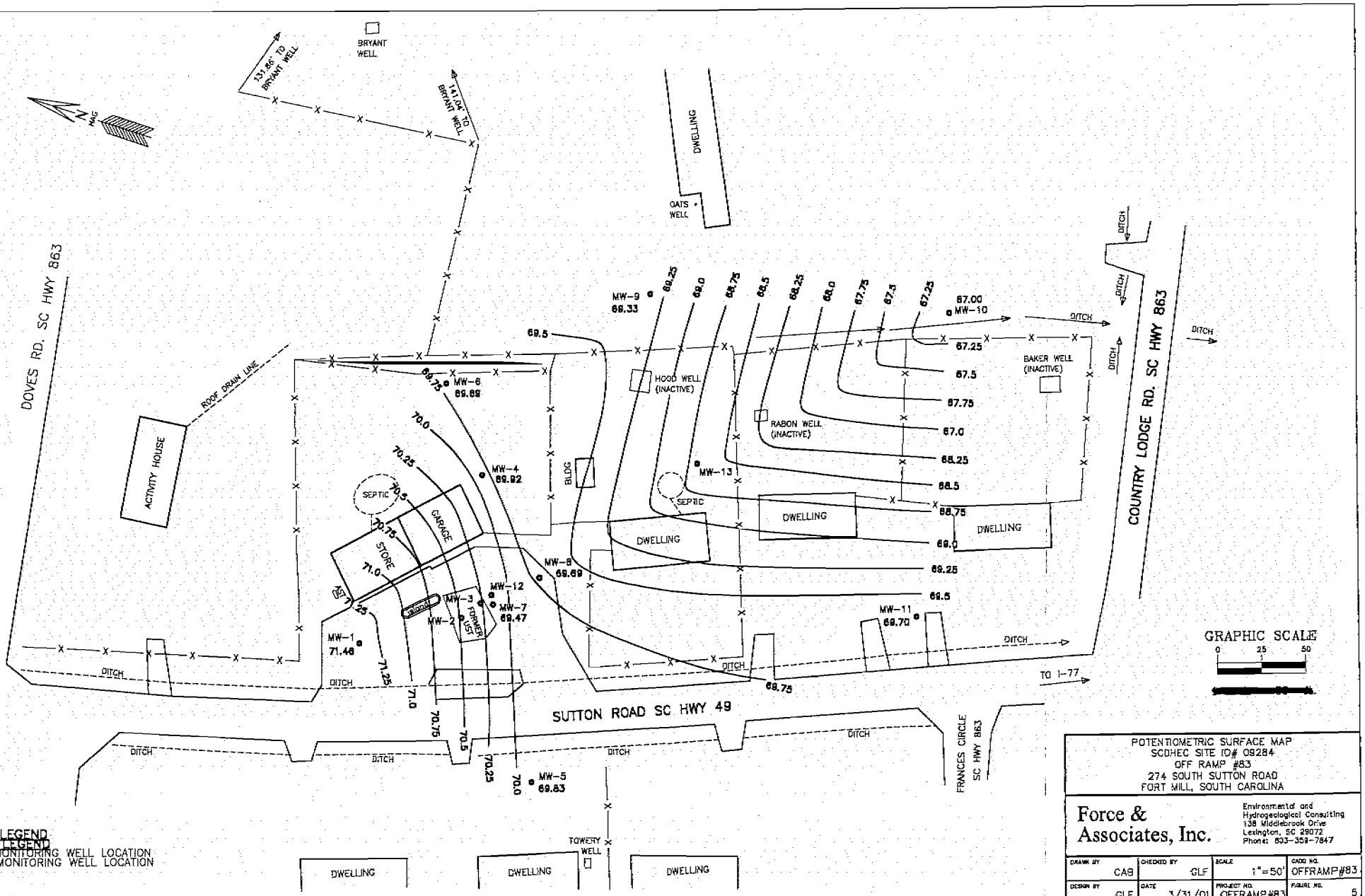
FIGURE 2

SITE MAP
SCDHEC SITE ID# 09284
OFF RAMP #83
274 SOUTH SUTTON ROAD
FORT MILL, SOUTH CAROLINA

Force & Associates, Inc.

Environmental and Hydrogeological Consulting
138 Middlebrook Drive
Lexington, SC 29072
Phone: 803-359-7847

DRAWN BY	CHECKED BY	SCALE	CADD NO.
CAB	GLF	1"=50'	OFFRAMP#83
DESIGN BY	DATE	PROJECT NO.	FIGURE NO.
GLF	11/27/02	OFFRAMP#83	1



LEGEND
MONITORING WELL LOCATION

POTENTIOMETRIC SURFACE MAP
SCDHEC SITE ID# 09284
OFF RAMP #83
274 SOUTH SUTTON ROAD
FORT MILL, SOUTH CAROLINA

Force & Associates, Inc.
Environmental and Hydrogeological Consulting
138 Middlebrook Drive
Lexington, SC 29072
Phone: 803-359-7847

DRAWN BY	CHECKED BY	SCALE	CADD NO.
CAB	GLF	1"=50'	OFFRAMP#83
DESIGN BY	DATE	PROJECT NO.	FIGURE NO.
GLF	3/31/01	OFFRAMP#83	5

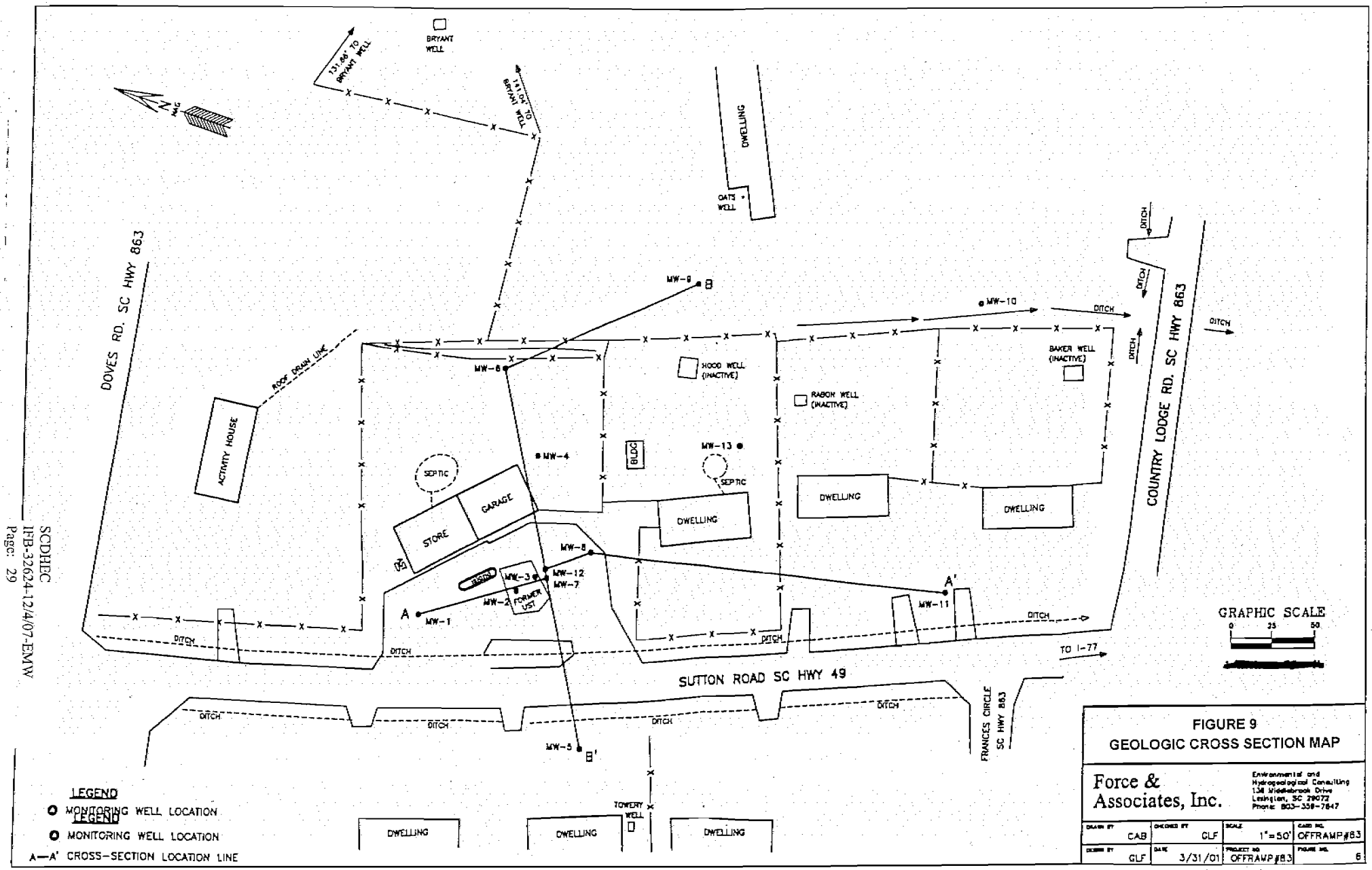


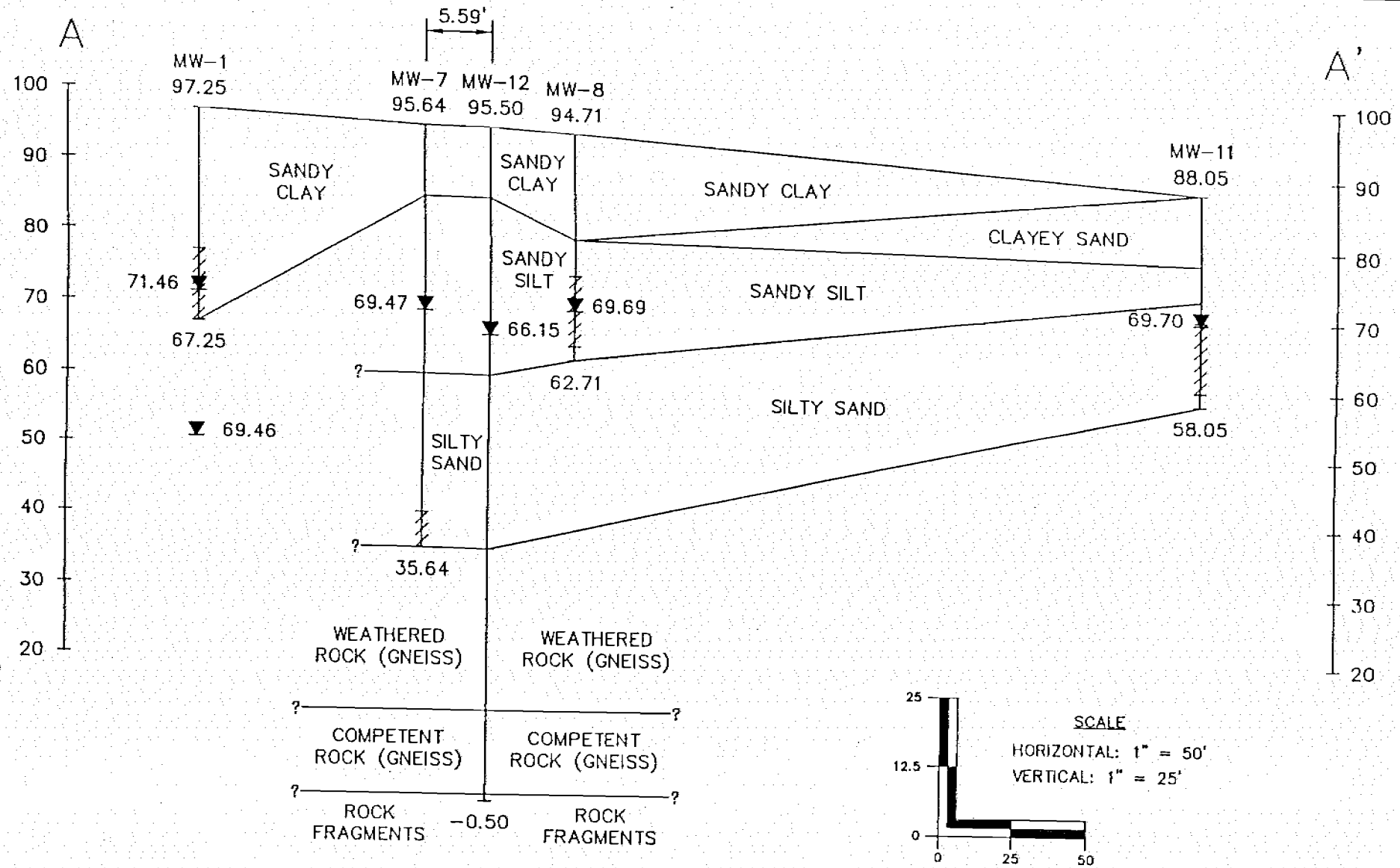
FIGURE 9
GEOLOGIC CROSS SECTION MAP

Force & Associates, Inc.

Environmental and Hydrogeological Consulting
134 Middlebrook Drive
Lexington, SC 29072
Phone: 803-358-7847

DRAWN BY	CHECKED BY	SCALE	CAD NO.
CAB	GLF	1"=50'	OFFRAMP#83
DESIGN BY	DATE	PROJECT NO.	FIGURE NO.
GLF	3/31/01	OFFRAMP#83	6

SCDHEC
IFB-32624-12/4/07-EMW
Page: 29



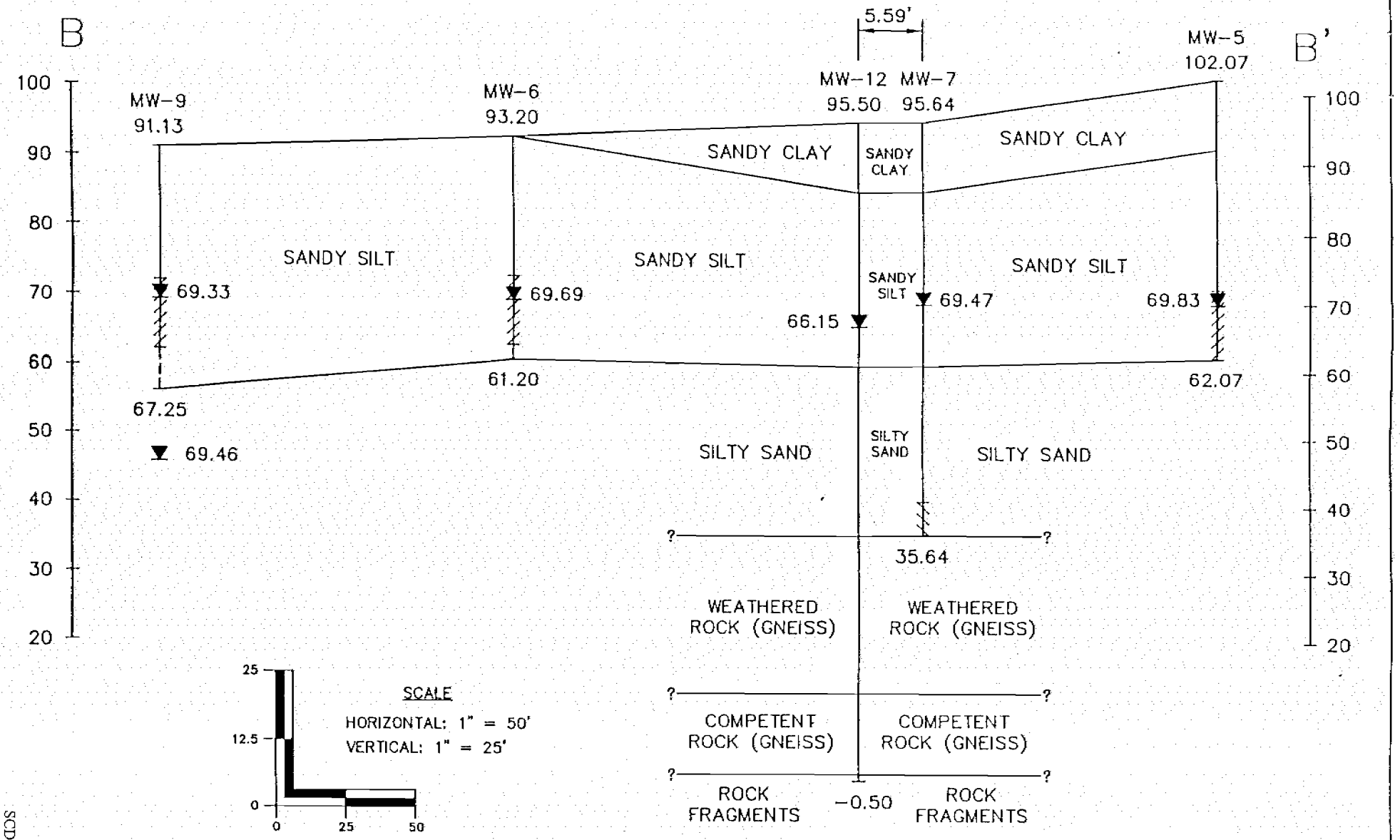
SCDHEC
IFB-32624-12/4/07-EMW
Page: 30

Force & Associates, Inc.	
Environmental & Hydrogeological Consulting 138 Middlebrook Drive Lexington, SC 29072 Phone: 803-359-7847	
SCALE	SHOWN
DRAWN BY	CAB
DESIGNED BY	GLF
DATE	3/24/01

GEOLOGIC CROSS-SECTION A-A'
SCDHEC SITE ID #09284
OFF RAMP #83
274 SOUTH SUTTON ROAD
FORT MILL, SOUTH CAROLINA

FIGURE 10

CADD NO.	OFFRAMPXS
PROJ. NO.	OFFRAMP83



orce & Associates, Inc. ironmental & Hydrogeological Consulting Middlebrook Drive ington, SC 29072 one: 803-359-7847	SCALE SHOWN DRAWN BY CAB DESIGNED BY GLF DATE 3/24/01	GEOLOGIC CROSS-SECTION B-B' SCDHEC SITE ID #09284 OFF RAMP #83 274 SOUTH SUTTON ROAD FORT MILL, SOUTH CAROLINA	**FIGURE 11** CADD NO. OFFRAMPXS PROJ. NO. OFFRAMP83

Table of Well Construction Data
Table of Historical CoC Concentrations
Table of Historical Groundwater Elevations

5.2 Summary of Monitoring Well and Groundwater Data

WELL NUMBER	SAMPLING DATE	SCREEN DEPTH (FT)	SCREENED INTERVAL (FT)	DEPTH TO WATER (FT)	WATER TABLE ELEV (FT)
MW-1	2/13/01	30	30 to 20	25.79	71.46
MW-2	Dry	25	25 to 15	Dry	-
MW-3	2/13/01	30	30 to 20	Free Product	-
MW-4	2/15/01	30	30 to 20	23.23	69.92
MW-5	2/15/01	40	40 to 30	32.24	69.83
MW-6	2/15/01	30	30 to 20	23.51	69.69
MW-7	2/15/01	60	60 to 50	26.17	69.47
MW-8	2/15/01	33.5	33.5 to 23.5	25.02	69.69
MW-9	2/15/01	28.55	28.55 to 18.55	21.80	69.33
MW-10	3/5/01	25	25 to 15	14.51	67.00
MW-11	3/5/01	28	28 to 18	18.35	69.70
MW-12	3/5/01	96	96 to 86	29.35	66.15
MW-13	3/28/01	28	28 to 18	20.65	69.83

The following measurements were recorded from field personnel on November 26, 2002:

MW #	TOC Elevation (ft)	Depth to Water (ft)	pH (s.u.)	Conductivity (umhos/cm)	Temperature (°C)	Screen interval
MW-1R	97.25	28.25	7.1	126	18.9	25-35
MW-2R	95.51	28.65	5.5	56	19.9	25-35
MW-3R	95.72	28.06	5.4	54	19.4	25-35

Table 3
Summary of Groundwater Elevation Data[1]
Off Ramp 83, SCDHEC UST Permit #09284
Fort Mill, South Carolina
Sub-Surface Waste Management, Inc. Project Number R-01-027

Well ID Number	Well Depth (Feet)	Screened Interval (Feet below grade)	Date	Casing Elevation (Feet)	Depth to LPH[2] (Feet)	Depth to Water (Feet)	LPH Thickness (Feet)	LPH Elevation (Feet)	Water Elevation (Feet)
MW-1	30	20.0 - 30.0	01/09/02	97.25	NA[3]	27.31	NA	NA	69.94
			09/27/02	97.25	NA	28.51	NA	NA	68.74
			01/17/03	97.25	NA	27.12	NA	NA	70.13
			04/30/03	97.25	NA	NM	NA	NA	Unknown
			09/04/03	97.25	NA	NM	NA	NA	Unknown
			10/15/03	97.25	NA	NM	NA	NA	Unknown
			01/06/04	97.25	NA	21.30	NA	NA	75.95
			03/25/04	97.25	NA	NM	NA	NA	Unknown
			06/30/04	97.25	NA	NM	NA	NA	Unknown
			09/24/04	97.25	NA	NM	NA	NA	Unknown
			12/17/04	97.25	NA	NM	NA	NA	Unknown
			03/20/05	97.25	NA	NM	NA	NA	Unknown
			06/29/05	97.25	NA	NM	NA	NA	Unknown
MW-1R	35	25.0 - 35.0	04/30/03	97.25	NA	23.32	NA	NA	73.93
			09/04/03	97.25	NA	19.18	NA	NA	78.07
			10/15/03	97.25	NA	19.84	NA	NA	77.41
			01/06/04	97.25	NA	NM	NA	NA	Unknown
			03/25/04	97.25	NA	21.55	NA	NA	75.70
			06/30/04	97.25	NA	22.34	NA	NA	74.91
			09/24/04	97.25	NA	23.44	NA	NA	73.81
			12/17/04	97.25	NA	23.56	NA	NA	73.69
			03/20/05	97.25	NA	23.11	NA	NA	74.14
			06/29/05	97.25	NA	21.91	NA	NA	75.34
			09/25/05	97.25	NA	23.06	NA	NA	74.19
MW-2	25	15.0 - 25.0	01/09/02	95.51	Unknown	Dry	Unknown	Unknown	Unknown
			09/27/02	95.51	Unknown	Dry	Unknown	Unknown	Unknown
			01/17/03	95.51	27.69	27.98	0.29	67.82	67.75
			04/30/03	95.51	NA	NM	NA	NA	Unknown
			09/04/03	95.51	NA	20.40	NA	NA	75.11
			10/15/03	95.51	NA	21.23	NA	NA	74.28
			01/06/04	95.51	NA	22.64	NA	NA	72.87
			03/25/04	95.51	NA	NM	NA	NA	Unknown
			06/30/04	95.51	NA	NM	NA	NA	Unknown
			09/24/04	95.51	NA	NM	NA	NA	Unknown
			12/17/04	95.51	NA	NM	NA	NA	Unknown
			03/20/05	95.51	NA	NM	NA	NA	Unknown
			06/29/05	95.51	NA	NM	NA	NA	Unknown

Table 3
Summary of Groundwater Elevation Data[1]
Off Ramp 83, SCDHEC UST Permit #09284
Fort Mill, South Carolina
Sub-Surface Waste Management, Inc. Project Number R-01-027

Well ID Number	Well Depth (Feet)	Screened Interval (Feet below grade)	Date	Casing Elevation (Feet)	Depth to LPH[2] (Feet)	Depth to Water (Feet)	LPH Thickness (Feet)	LPH Elevation (Feet)	Water Elevation (Feet)
MW-2R	35	25.0 - 35.0	04/30/03	95.51	24.83	24.90	0.07	70.68	70.66
			09/04/03	95.51	NA	20.45	NA	NA	75.06
			10/15/03	95.51	NA	NM	NA	NA	Unknown
			01/06/04	95.51	NA	NM	NA	NA	Unknown
			03/25/04	95.51	NA	23.06	NA	NA	72.45
			06/30/04	95.51	NA	23.19	NA	NA	72.32
			09/24/04	95.51	NA	24.14	NA	NA	71.37
			12/17/04	95.51	NA	24.84	NA	NA	70.67
			03/20/05	95.51	NA	23.62	NA	NA	71.89
			06/29/05	95.51	NA	22.97	NA	NA	72.54
			09/25/05	95.51	NA	23.89	NA	NA	71.62
MW-3	30	20.0 - 30.0	01/09/02	95.32	NA	29.03	NA	NA	66.29
			09/27/02	95.32	28.87	29.40	0.53	66.45	66.32
			01/17/03	95.32	NA	28.70	NA	NA	66.62
			04/30/03	95.32	NA	NM	NA	NA	Unknown
			09/04/03	95.32	NA	19.82	NA	NA	75.50
			10/15/03	95.32	NA	NM	NA	NA	Unknown
			01/06/04	95.32	NA	22.28	NA	NA	73.04
			03/25/04	95.32	NA	NM	NA	NA	Unknown
			06/30/04	95.32	NA	NM	NA	NA	Unknown
			09/24/04	95.32	NA	NM	NA	NA	Unknown
			12/17/04	95.32	NA	NM	NA	NA	Unknown
			03/20/05	95.32	NA	NM	NA	NA	Unknown
			06/29/05	95.32	NA	NM	NA	NA	Unknown
MW-3R	35	25.0 - 35.0	04/30/03	95.72	25.41	25.43	0.02	70.31	70.31
			09/04/03	95.72	NA	19.88	NA	NA	75.84
			10/15/03	95.72	NA	20.66	NA	NA	75.06
			01/06/04	95.72	NA	NM	NA	NA	Unknown
			03/25/04	95.72	NA	23.24	NA	NA	72.48
			06/30/04	95.72	NA	22.60	NA	NA	73.12
			09/24/04	95.72	NA	23.56	NA	NA	72.16
			12/17/04	95.72	NA	24.78	NA	NA	70.94
			03/20/05	95.72	NA	23.03	NA	NA	72.69
			06/29/05	95.72	NA	22.73	NA	NA	72.99
			09/25/05	95.72	NA	23.41	NA	NA	72.31

Table 3
Summary of Groundwater Elevation Data[1]
Off Ramp 83, SCDHEC UST Permit #09284
Fort Mill, South Carolina
Sub-Surface Waste Management, Inc. Project Number R-01-027

Well ID Number	Well Depth (Feet)	Screened Interval (Feet below grade)	Date	Casing Elevation (Feet)	Depth to LPH[2] (Feet)	Depth to Water (Feet)	LPH Thickness (Feet)	LPH Elevation (Feet)	Water Elevation (Feet)
MW-4	30	20.0 - 30.0	01/09/02	93.15	NA	25.43	NA	NA	67.72
			09/27/02	93.15	NA	26.38	NA	NA	66.77
			01/17/03	93.15	NA	24.34	NA	NA	68.81
			04/30/03	93.15	NA	19.45	NA	NA	73.70
			09/04/03	93.15	NA	17.20	NA	NA	75.95
			10/15/03	93.15	NA	18.19	NA	NA	74.96
			01/06/04	93.15	NA	19.42	NA	NA	73.73
			03/25/04	93.15	NA	19.05	NA	NA	74.10
			06/30/04	93.15	NA	20.08	NA	NA	73.07
			09/24/04	93.15	NA	21.02	NA	NA	72.13
			12/17/04	93.15	NA	21.17	NA	NA	71.98
			03/20/05	93.15	NA	20.21	NA	NA	72.94
			06/29/05	93.15	NA	19.53	NA	NA	73.62
			09/25/05	93.15	NA	21.09	NA	NA	72.06
MW-5	40	30.0 - 40.0	01/09/02	102.07	NA	25.43	NA	NA	76.64
			09/27/02	102.07	NA	35.35	NA	NA	66.72
			01/17/03	102.07	NA	33.55	NA	NA	68.52
			04/30/03	102.07	NA	30.24	NA	NA	71.83
			09/04/03	102.07	NA	26.17	NA	NA	75.90
			10/15/03	102.07	NA	26.87	NA	NA	75.20
			01/06/04	102.07	NA	28.13	NA	NA	73.94
			03/25/04	102.07	NA	28.03	NA	NA	74.04
			06/30/04	102.07	NA	28.87	NA	NA	73.20
			09/24/04	102.07	NA	29.83	NA	NA	72.24
			12/17/04	102.07	NA	29.99	NA	NA	72.08
			03/20/05	102.07	NA	29.31	NA	NA	72.76
			06/29/05	102.07	NA	28.36	NA	NA	73.71
			09/25/05	102.07	NA	29.62	NA	NA	72.45
MW-6	30	20.0 - 30.0	01/09/02	93.20	NA	25.64	NA	NA	67.56
			09/27/02	93.20	NA	26.65	NA	NA	66.55
			01/17/03	93.20	NA	24.50	NA	NA	68.70
			04/30/03	93.20	NA	19.80	NA	NA	73.40
			09/04/03	93.20	NA	17.31	NA	NA	75.89
			10/15/03	93.20	NA	18.29	NA	NA	74.91
			01/06/04	93.20	NA	28.13	NA	NA	65.07
			03/25/04	93.20	NA	19.12	NA	NA	74.08
			06/30/04	93.20	NA	20.31	NA	NA	72.89
			09/24/04	93.20	NA	21.29	NA	NA	71.91
			12/17/04	93.20	NA	21.36	NA	NA	71.84
			03/20/05	93.20	NA	20.38	NA	NA	72.82
			06/29/05	93.20	NA	19.75	NA	NA	73.45
			09/25/05	93.20	NA	21.25	NA	NA	71.95

Table 3
Summary of Groundwater Elevation Data[1]
Off Ramp 83, SCDHEC UST Permit #09284
Fort Mill, South Carolina
Sub-Surface Waste Management, Inc. Project Number R-01-027

Well ID Number	Well Depth (Feet)	Screened Interval (Feet below grade)	Date	Casing Elevation (Feet)	Depth to LPH[2] (Feet)	Depth to Water (Feet)	LPH Thickness (Feet)	LPH Elevation (Feet)	Water Elevation (Feet)
MW-7	60	50.0 - 60.0	01/09/02	95.64	NA	27.91	NA	NA	Unknown
			09/27/02	95.64	NA	29.35	NA	NA	66.29
			01/17/03	95.64	NA	27.38	NA	NA	68.26
			04/30/03	95.64	NA	24.47	NA	NA	71.17
			09/04/03	95.64	NA	19.83	NA	NA	75.81
			10/15/03	95.64	NA	20.62	NA	NA	75.02
			01/06/04	95.64	NA	28.13	NA	NA	67.51
			03/25/04	95.64	NA	22.59	NA	NA	73.05
			06/30/04	95.64	NA	22.60	NA	NA	73.04
			09/24/04	95.64	NA	23.55	NA	NA	72.09
			12/17/04	95.64	NA	24.17	NA	NA	71.47
			03/20/05	95.64	NA	22.90	NA	NA	72.74
			06/29/05	95.64	NA	22.34	NA	NA	73.30
			09/25/05	95.64	NA	23.45	NA	NA	72.19
MW-8	33.5	23.5 - 33.5	01/09/02	94.71	NA	26.95	NA	NA	67.76
			09/27/02	94.71	NA	27.82	NA	NA	66.89
			01/17/03	94.71	NA	26.14	NA	NA	68.57
			04/30/03	94.71	NA	23.16	NA	NA	71.55
			09/04/03	94.71	NA	18.85	NA	NA	75.86
			10/15/03	94.71	NA	19.68	NA	NA	75.03
			01/06/04	94.71	NA	20.94	NA	NA	73.77
			03/25/04	94.71	NA	20.93	NA	NA	73.78
			06/30/04	94.71	NA	21.55	NA	NA	73.16
			09/24/04	94.71	NA	22.49	NA	NA	72.22
			12/17/04	94.71	NA	23.78	NA	NA	70.93
			03/20/05	94.71	NA	21.82	NA	NA	72.89
			06/29/05	94.71	NA	21.15	NA	NA	73.56
			09/25/05	94.71	NA	22.48	NA	NA	72.23
MW-9	28.55	18.55 - 28.55	01/09/02	91.13	NA	24.20	NA	NA	66.93
			09/27/02	91.13	NA	25.26	NA	NA	65.87
			01/17/03	91.13	NA	22.95	NA	NA	68.18
			04/30/03	91.13	NA	18.21	NA	NA	72.92
			09/04/03	91.13	NA	16.13	NA	NA	75.00
			10/15/03	91.13	NA	17.02	NA	NA	74.11
			01/06/04	91.13	NA	18.03	NA	NA	73.10
			03/25/04	91.13	NA	17.51	NA	NA	73.62
			06/30/04	91.13	NA	18.90	NA	NA	72.23
			09/24/04	91.13	NA	19.83	NA	NA	71.30
			12/17/04	91.13	NA	19.74	NA	NA	71.39
			03/20/05	91.13	NA	18.58	NA	NA	72.55
			06/29/05	91.13	NA	18.36	NA	NA	72.77
			09/25/05	91.13	NA	20.03	NA	NA	71.10

Table 3
Summary of Groundwater Elevation Data[1]
Off Ramp 83, SCDHEC UST Permit #09284
Fort Mill, South Carolina
Sub-Surface Waste Management, Inc. Project Number R-01-027

Well ID Number	Well Depth (Feet)	Screened Interval (Feet below grade)	Date	Casing Elevation (Feet)	Depth to LPH[2] (Feet)	Depth to Water (Feet)	LPH Thickness (Feet)	LPH Elevation (Feet)	Water Elevation (Feet)
MW-10	25	15.0 - 25.0	01/09/02	81.51	NA	14.96	NA	NA	66.55
			09/27/02	81.51	NA	15.91	NA	NA	65.60
			01/17/03	81.51	NA	13.42	NA	NA	68.09
			04/30/03	81.51	NA	9.74	NA	NA	71.77
			09/04/03	81.51	NA	7.39	NA	NA	74.12
			10/15/03	81.51	NA	8.30	NA	NA	73.21
			01/06/04	81.51	NA	9.08	NA	NA	72.43
			03/25/04	81.51	NA	8.46	NA	NA	73.05
			06/30/04	81.51	NA	9.49	NA	NA	72.02
			09/24/04	81.51	NA	10.42	NA	NA	71.09
			12/17/04	81.51	NA	10.13	NA	NA	71.38
			03/20/05	81.51	NA	8.58	NA	NA	72.93
			06/29/05	81.51	NA	9.03	NA	NA	72.48
			09/25/05	81.51	NA	11.00	NA	NA	70.51
MW-11	28	18.0 - 28.0	01/09/02	88.05	NA	20.40	NA	NA	67.65
			09/27/02	88.05	NA	21.45	NA	NA	66.60
			01/17/03	88.05	NA	19.40	NA	NA	68.65
			04/30/03	88.05	NA	15.87	NA	NA	72.18
			09/04/03	88.05	NA	12.71	NA	NA	75.34
			10/15/03	88.05	NA	13.43	NA	NA	74.62
			01/06/04	88.05	NA	14.46	NA	NA	73.59
			03/25/04	88.05	NA	14.23	NA	NA	73.82
			06/30/04	88.05	NA	15.09	NA	NA	72.96
			09/24/04	88.05	NA	15.97	NA	NA	72.08
			12/17/04	88.05	NA	15.95	NA	NA	72.10
			03/20/05	88.05	NA	15.23	NA	NA	72.82
			06/29/05	88.05	NA	14.71	NA	NA	73.34
			09/25/05	88.05	NA	16.03	NA	NA	72.02
MW-12[4]	96	86.0 - 96.0	01/09/02	95.50	NA	27.81	NA	NA	67.69
			09/27/02	95.50	NA	29.01	NA	NA	66.49
			01/17/03	95.50	NA	27.04	NA	NA	68.46
			04/30/03	95.50	NA	23.70	NA	NA	71.80
			09/04/03	95.50	NA	19.68	NA	NA	75.82
			10/15/03	95.50	NA	20.47	NA	NA	75.03
			01/06/04	95.50	NA	21.77	NA	NA	73.73
			03/25/04	95.50	NA	21.85	NA	NA	73.65
			06/30/04	95.50	NA	22.42	NA	NA	73.08
			09/24/04	95.50	NA	23.40	NA	NA	72.10
			12/17/04	95.50	NA	23.71	NA	NA	71.79
			03/20/05	95.50	NA	22.71	NA	NA	72.79
			06/29/05	95.50	NA	22.00	NA	NA	73.50
			09/25/05	95.50	NA	23.30	NA	NA	72.20

Table 3
Summary of Groundwater Elevation Data[1]
Off Ramp 83, SCDHEC UST Permit #09284
Fort Mill, South Carolina
Sub-Surface Waste Management, Inc. Project Number R-01-027

Well ID Number	Well Depth (Feet)	Screened Interval (Feet below grade)	Date	Casing Elevation (Feet)	Depth to LPH[2] (Feet)	Depth to Water (Feet)	LPH Thickness (Feet)	LPH Elevation (Feet)	Water Elevation (Feet)
MW-13	28	18.0 - 28.0	01/09/02	90.48	NA	23.06	NA	NA	67.42
			09/27/02	90.48	NA	24.00	NA	NA	66.48
			01/17/03	90.48	NA	21.73	NA	NA	68.75
			04/30/03	90.48	NA	17.35	NA	NA	73.13
			09/04/03	90.48	NA	15.07	NA	NA	75.41
			10/15/03	90.48	NA	16.02	NA	NA	74.46
			01/06/04	90.48	NA	16.77	NA	NA	73.71
			03/25/04	90.48	NA	16.57	NA	NA	73.91
			06/30/04	90.48	NA	17.63	NA	NA	72.85
			09/24/04	90.48	NA	18.55	NA	NA	71.93
			12/17/04	90.48	NA	18.52	NA	NA	71.96
			03/20/05	90.48	NA	17.33	NA	NA	73.15
			06/29/05	90.48	NA	17.21	NA	NA	73.27
			09/25/05	Well Not Accessible					

Notes:

(1). Elevations are relative to an assumed benchmark.

(2). Liquid Phase Petroleum Hydrocarbons.

(3). Not applicable.

(4). Originally completed as open face rock wells and converted to telescoping vertical extent wells via a 2-inch inner casing installation sand pack, bentonite and grout seals.

(5). Not measured.

Table 4

Summary of Laboratory Analytical Results - Groundwater

Off Ramp 83, SCDHEC UST Permit #09284

Fort Mill, South Carolina

Sub-Surface Waste Management, Inc. Project Number R-01-027

Analytical Method		EPA 8260					EPA 8011
Chemical of Concern		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	EDB
Monitoring Well Identification Number		(ug/L)[1]	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW-1R	08/31/01	18.0	24.6	4.8	26.4	<5.0	0.41
	01/09/02	11	18	7.4	22.4	<5.0	<5.0
	09/27/02	Dry Well					
	01/17/03	<5.0	<5.0	<5.0	<10	<5.0	<5.0
	05/01/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/04/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	10/15/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/06/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	03/25/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	06/30/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/24/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	12/17/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	03/20/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	06/29/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/25/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
MW-2R	08/31/01	Dry Well					
	01/09/02						
	09/27/02						
	01/17/03	Liquid Phase Petroleum Hydrocarbons					
	05/01/03						
	09/04/03	6,100	41,000	1,600	18,100	710	36
	10/15/03	5,200	35,000	<2,500	21,700	5,100	49
	01/06/04	4,400	30,000	2,200	13,700	570	19
	03/25/04	4,700	31,000	1,700	14,600	<1,200	31
	06/30/04	5,100	32,000	2,100	15,100	<1,000	23
	09/24/04	620	12,000	1,900	10,700	1,200	1.9
	12/17/04	<500	5,000	650	4,500	820	0.78
	03/20/05	<250	2,600	500	3,070	590	0.37
	06/29/05	880	6,200	260	4,100	<500	0.020
	09/25/05	1,000	11,000	980	6,100	480	1.200
MW-3R	SSTL	295	78,836	55,173	226,000	275	0.6
	08/31/01	Liquid Phase Petroleum Hydrocarbons					
	01/09/02						
	09/27/02						
	01/17/03	**27,000**	39,000	2,500	13,900	**610**	**410**
	05/01/03	Liquid Phase Petroleum Hydrocarbons					
	09/04/03	**15,000**	24,000	1,800	10,400	**<500**	**220**
	10/15/03	**15,000**	28,000	2,200	12,400	**<1,000**	**280**
	01/06/04	**15,000**	25,000	2,100	12,200	**<1,000**	**240**
	03/25/04	**16,000**	26,000	2,000	11,100	**<1,000**	**1,200**
	06/30/04	**14,000**	24,000	2,100	11,700	**<1,000**	**300**
	09/24/04	**1,000**	4,500	790	4,500	**400**	**14**
	12/17/04	**490**	990	240	1,420	170	**5.2**
	03/20/05	**690**	1,500	310	1,680	**280**	**10.0**
	06/29/05	**2,500**	4,300	520	3,160	<250	0.020
	09/25/05	**3,500**	6,000	710	4,300	580	21.000

Notes:
(1) Micrograms per liter.
(2) Site Pecific Target Level (SSTL)
(3) Not detected at or above detection limits specified in the laboratory report.
(4) Concentrations displayed in bold exceed the SSTL's.

Table 4

Summary of Laboratory Analytical Results - Groundwater

Off Ramp 83, SCDHEC UST Permit #09284

Fort Mill, South Carolina

Sub-Surface Waste Management, Inc. Project Number R-01-027

Analytical Method		EPA 8260					EPA 8011
Chemical of Concern		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	EDB
Monitoring Well Identification Number		(ug/L)[1]	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW-4	SSTL	8	3	<2	<2	<5	0.06
	08/31/01	7.5	3.4	<5.0	<10	<5.0	0.06
	01/09/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/27/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/17/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	05/01/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/04/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	10/15/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/06/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	03/25/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	06/30/04	<5.0	<5.0	<5.0	<10	<5.0	0.030
	09/24/04	7.2	<5.0	<5.0	<10	<5.0	<0.020
	12/17/04	<5.0	<5.0	<5.0	<10	<5.0	0.035
	03/20/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	06/29/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/25/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
MW-5	08/31/01	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/09/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/27/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/17/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	05/01/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/04/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	10/15/03	Field screened using a calibrated Photo Ionization Detector. No organics observed.					
	01/06/04						
	03/25/04						
	06/30/04						
	09/24/04						
	12/17/04						
	03/20/05						
	03/20/05						
	06/29/05						
	09/25/05						
MW-6	08/31/01	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/09/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/27/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/17/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	05/01/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/04/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	10/15/03	Field screened using a calibrated Photo Ionization Detector. No organics observed.					
	01/06/04						
	03/25/04						
	06/30/04						
	09/24/04						
	12/17/04						
	03/20/05						
	06/29/05						
	09/25/05						

Notes:
(1) Micrograms per liter.
(2) Site Pecific Target Level (SSTL)
(3) Not detected at or above detection limits specified in the laboratory report.
(4) Concentrations displayed in bold exceed the SSTL's.

Table 4

Summary of Laboratory Analytical Results - Groundwater

Off Ramp 83, SCDHEC UST Permit #09284

Fort Mill, South Carolina

Sub-Surface Waste Management, Inc. Project Number R-01-027

Analytical Method		EPA 8260					EPA 8011
Chemical of Concern		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	EDB
Monitoring Well Identification Number		(ug/L)[1]	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW-7	SSTL	295	26,800	2,340	13,200	275	0.6
	08/31/01	**14,600**	26,800	2,340	13,200	**1,260**	**24.8**
	01/09/02	**12,000**	23,000	2,100	12,100	**730**	**38.1**
	09/27/02	**6,300**	15,000	1,400	8,100	**<1,000**	**18**
	01/17/03	66	150	21	146	12	0.51
	05/01/03	**410**	600	62	730	53	**2.2**
	09/04/03	150	5.5	<5.0	136	32	<0.020
	10/15/03	130	<5.0	<5.0	126	25	0.076
	01/06/04	**330**	27	<5.0	267	62	<0.020
	03/25/04	210	<25	<25	219	50	<0.020
	06/30/04	**300**	23	<10	337	92	<0.020
	09/24/04	58	8	<10	74	20	<0.020
	12/17/04	270	20	91.0	850	230	0.21
	03/20/05	42	<5.0	5.0	49	20	<0.020
	06/29/05	130	21	<5.0	540	160	<0.020
	09/25/05	260	1,300	160.0	1,910	200	<0.020
MW-8	SSTL	182	15,200	2,950	18,000	218	0.4
	08/31/01	**3,580**	15,200	2,950	18,000	**1,070**	**17.5**
	01/09/02	**3,800**	**16,000**	2,700	16,800	**1,000**	**19.3**
	09/27/02	**1,100**	4,400	860	8,300	**<500**	**8.9**
	01/17/03	**770**	2,800	810	6,200	**420**	<0.02
	05/01/03	**1,400**	4,900	1,300	9,900	**1,300**	**9**
	09/04/03	**710**	2,400	640	4,400	**380**	**1.6**
	10/15/03	970	4,000	1,200	8,200	**660**	**5.4**
	01/06/04	**1,500**	2,700	1,700	10,700	**900**	**3.8**
	03/25/04	**780**	3,300	1,200	8,700	**650**	**2.7**
	06/30/04	**490**	2,300	880	6,300	**900**	**3.4**
	09/24/04	59	320	180	1,380	190	0.2
	12/17/04	53	26	53	680	180	0.10
	03/20/05	140	39	79	1,340	**560**	0.23
	06/29/05	**480**	550	480	3,200	**500**	0.020
	09/25/05	120	490	220	3,300	**410**	0.300
MW-9	SSTL	<2	2	<2	<2	<5	<0.02
	08/31/01	ND	2.2	ND	ND	ND	ND
	01/09/02	ND	ND	ND	ND	ND	ND
	09/27/02	<5	<5	<5	<10	<5	<0.02
	01/17/03	<5	<5	<5	<10	<5	<0.02
	05/01/03	<5	<5	<5	<10	<5	<0.020
	09/04/03	<5	<5	<5	<10	<5	<0.020
	10/15/03						
	01/06/04						
	03/25/04						
	06/30/04						
	09/24/04	Field screened using a calibrated Photo Ionization Detector. No organics observed.					
	12/17/04						
	03/20/05						
	06/29/05						
	09/25/05						

Notes:
(1) Micrograms per liter.
(2) Site Pecific Target Level (SSTL)
(3) Not detected at or above detection limits specified in the laboratory report.
(4) Concentrations displayed in bold exceed the SSTL's.

SCDHEC
IFB-32624-12/4/07-EMW
Page: 42

Table 4

Summary of Laboratory Analytical Results - Groundwater

Off Ramp 83, SCDHEC UST Permit #09284

Fort Mill, South Carolina

Sub-Surface Waste Management, Inc. Project Number R-01-027

Analytical Method		EPA 8260					EPA 8011
Chemical of Concern		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	EDB
Monitoring Well Identification Number		(ug/L)[1]	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW-10	08/31/01	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/09/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/27/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/17/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	05/01/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/04/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	10/15/03	Field screened using a calibrated Photo Ionization Detector. No organics observed.					
	01/06/04						
	03/25/04						
	06/30/04						
	09/24/04						
	12/17/04						
	03/20/05						
	06/29/05						
	09/25/05						
MW-11	08/31/01	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/09/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/09/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/17/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	05/01/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/04/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	10/15/03	Field screened using a calibrated Photo Ionization Detector. No organics observed.					
	01/06/04						
	03/25/04						
	06/30/04						
	09/24/04						
	12/17/04						
	03/20/05						
	06/29/05						
	09/25/05						
MW-12	SSTL[3]	10	<1	<1	3	<5.0	0.18
	09/04/01	9.5	<5.0	<5.0	2.5	<5.0	0.18
	01/09/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/27/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/17/03	6.6	18	<5	<10	<5.0	0.063
	05/01/03	<5.0	<5.0	<5.0	<10	<5.0	0.11
	09/04/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	10/15/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/06/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	03/25/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	06/30/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/24/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	12/17/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	03/20/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	06/29/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/25/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020

Notes:
(1) Micrograms per liter.
(2) Site Pecific Target Level (SSTL)
(3) Not detected at or above detection limits specified in the laboratory report.
(4) Concentrations displayed in bold exceed the SSTL's.

Table 4

Summary of Laboratory Analytical Results - Groundwater

Off Ramp 83, SCDHEC UST Permit #09284

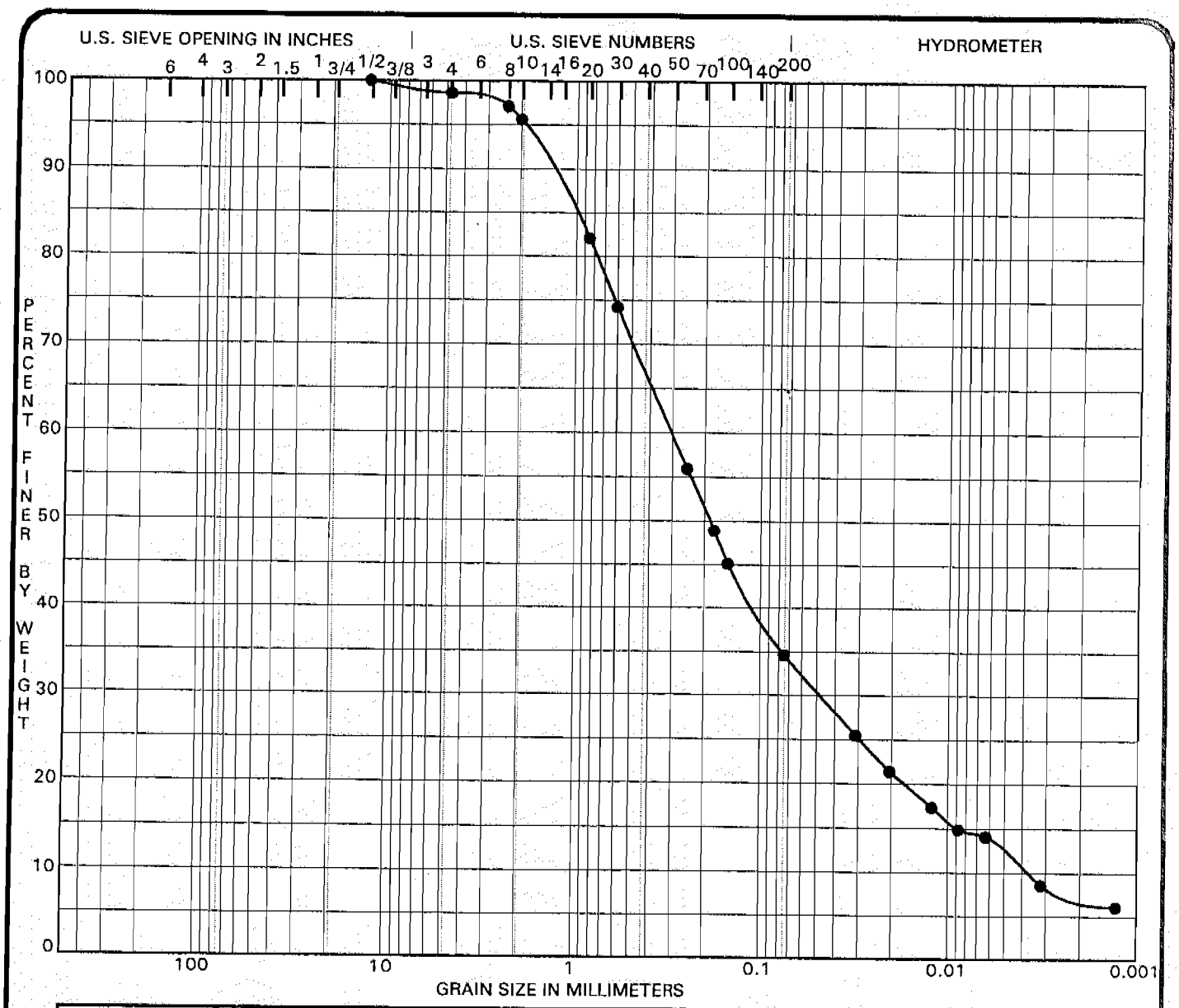
Fort Mill, South Carolina

Sub-Surface Waste Management, Inc. Project Number R-01-027

Analytical Method		EPA 8260					EPA 8011
Chemical of Concern		Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	EDB
Monitoring Well Identification Number		(ug/L)[1]	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
MW-13	SSTL	<2	<2	<2	<2	<5	<0.02
	08/31/01	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/09/02	<5.0	<5.0	<5.0	ND	<5.0	<0.020
	09/27/02	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/17/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	05/01/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/04/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	10/15/03	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	01/06/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	03/25/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	06/30/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/24/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	12/17/04	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	03/20/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	06/29/05	<5.0	<5.0	<5.0	<10	<5.0	<0.020
	09/25/05	Not Sampled, well not accessible					

Notes:
(1) Micrograms per liter.
(2) Site Pecific Target Level (SSTL)
(3) Not detected at or above detection limits specified in the laboratory report.
(4) Concentrations displayed in bold exceed the SSTL's.

Soil Grain Size Distribution



COBBLES	GRAVEL		SAND			SILT OR CLAY
	coarse	fine	coarse	medium	fine	

Specimen Identification	Classification	MC%	LL	PL	PI	Cc	Cu
● OR 83	Tan Micaceous Silty F/C SAND with Asphalt Fragments (SM)						

Specimen Identification	D100	D60	D30	D10	%Gravel	%Sand	%Silt	%Clay
● OR 83	12.70	0.30	0.048	0.0038	1.4	64.0	22.4	12.2

PROJECT Katawba Environmental - Rock Hill, South Carolina

JOB NO. 451-80194

DATE 12/14/98

PARTICLE SIZE DISTRIBUTION CURVES

PSI

Columbia, South Carolina

Hydrologic Testing Results

D H E C
PROMOTE PROTECT PROSPER

Summary of Slug Test
Division of Underground Storage Tank Management

te Data

UST Permit #: 09284 County: YORK

Facility Name: OFF RAMP #83

Slug Data

See Appendix _____ Table _____ Figure _____ for a list of all data measurements. [water level logs, etc. (complete as appropriate)].

Water Level Recovery Data was measured by AQUASTAR DL1-1A
[Hermit Data Logger, Manually with Water Level Indicator, etc. (list method)].

Complete the following table for each well tested.

COMPLETE A SECOND SHEET IF MORE THAN FOUR WELLS ARE TESTED

Slug Test Conducted in Well(s) Number	MW-5	MW-6	MW-7	
Initial Rise/Drawdown in Well (feet)	1.19	1.14	1.83	
Radius of Well Casing (feet)	0.083	0.083	0.083	
Effective Radius of Well (feet)	0.167	0.167	0.167	
Static Saturated Aquifer Thickness (feet)	50	50	50	
Length of Well Screen (feet)	10	10	5	
Static Height of Water Column in Well (ft)	6.37	5.63	3.02	

Calculations

See Appendix _____ Table _____ Figure _____ for calculations (complete as appropriate).

The method for aquifer calculations was BOUWER-RICE (i.e. Bouwer-Rice, Cooper, etc.).

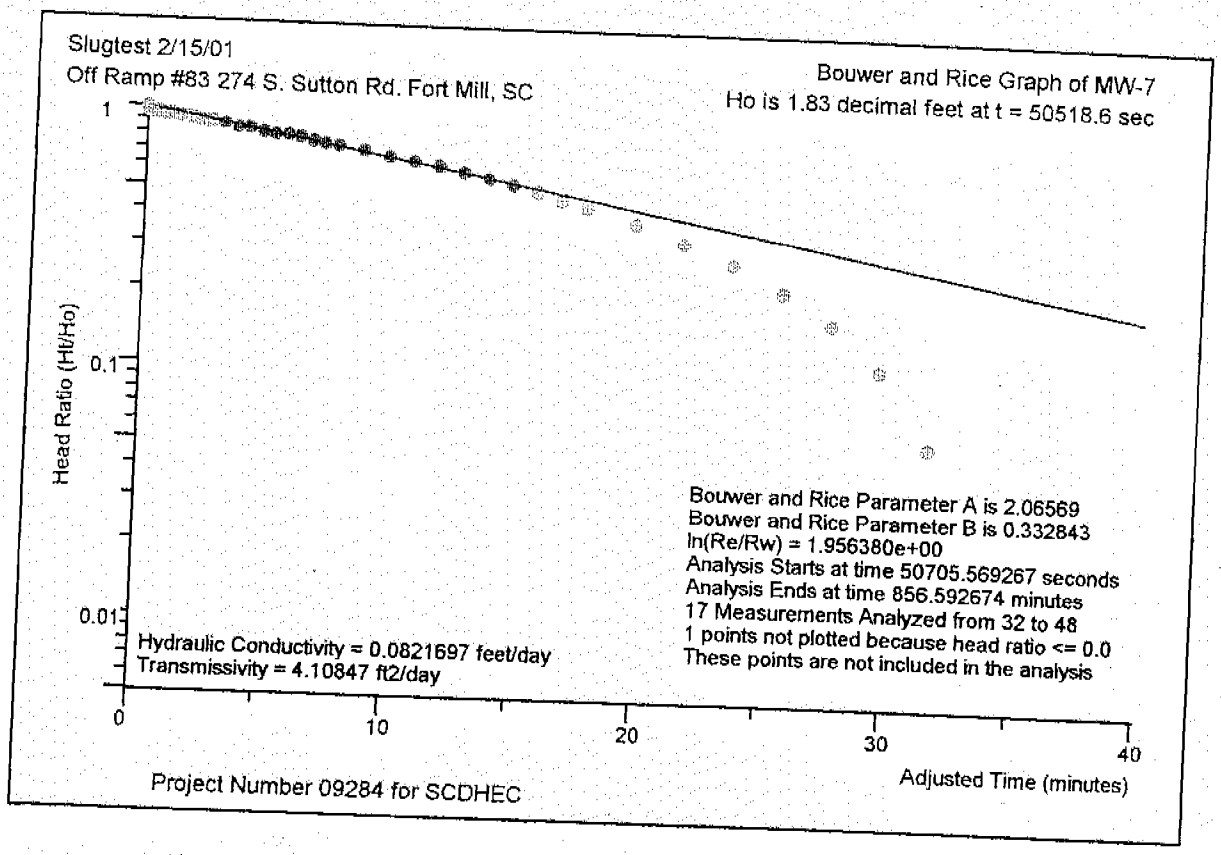
Calculated values by well were as follows:

Slug Test Conducted in Well(s) Number	MW-5	MW-6	MW-7
Hydraulic Conductivity	0.04 ft/day	1.9 ft/day	0.08 ft/day

Thickness of the aquifer used to calculate hydraulic conductivity was 50 feet.

The aquifer is _____ confined _____ semi-confined ✓ water table (check as appropriate).

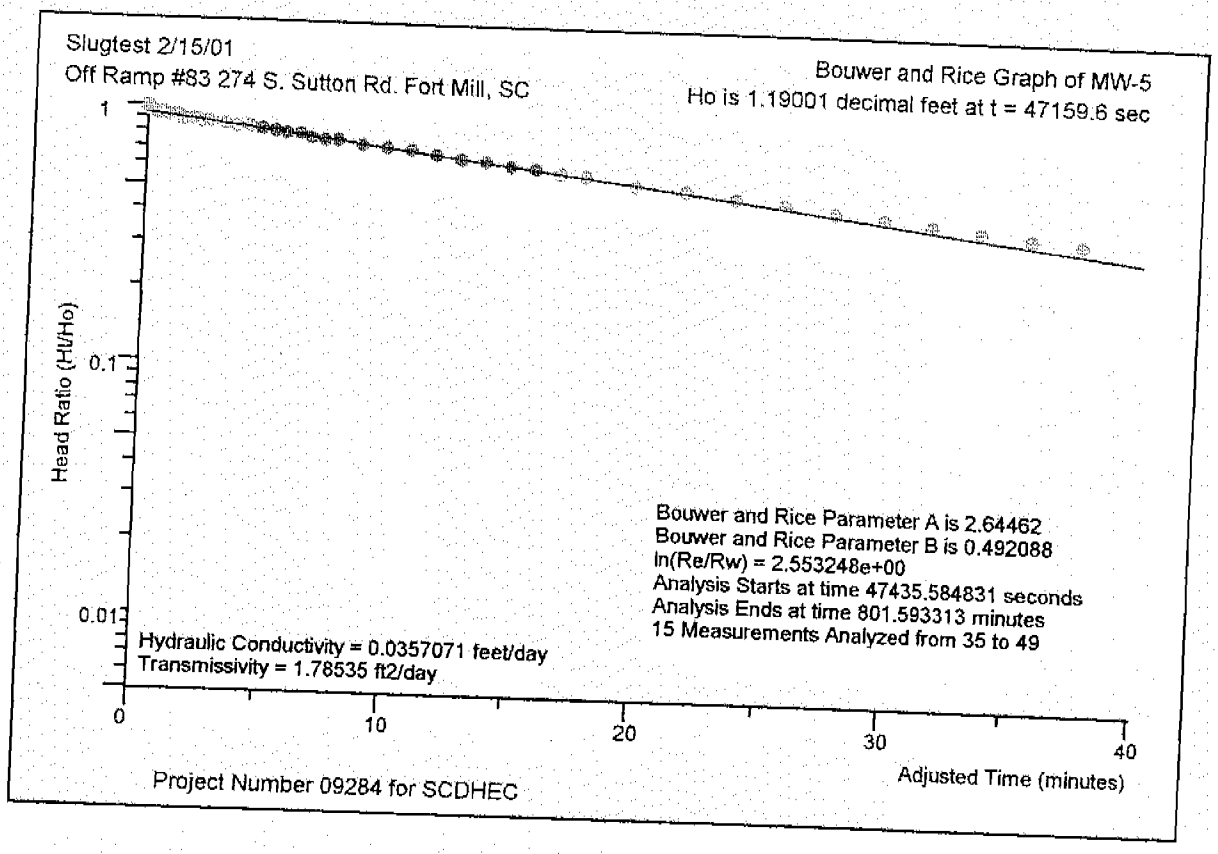
The estimated seepage velocity is 55 feet per year based on a hydraulic conductivity of 1.0 ft/day, a hydraulic gradient of 0.012, and a porosity of 8 percent for sandy silt soil (list type i.e., silty sand ,clay, etc).


Slugtest 2/15/01
Off Ramp #83 274 S. Sutton Rd. Fort Mill, SC
Bouwer and Rice Graph of MW-7
Ho is 1.83 decimal feet at t = 50518.6 sec
Head Ratio (Ht/Ho)
1
0.1
0.01
Bouwer and Rice Parameter A is 2.06569
Bouwer and Rice Parameter B is 0.332843
ln(Re/Rw) = 1.956380e+00
Analysis Starts at time 50705.569267 seconds
Analysis Ends at time 856.592674 minutes
17 Measurements Analyzed from 32 to 48
1 points not plotted because head ratio <= 0.0
These points are not included in the analysis
Hydraulic Conductivity = 0.0821697 feet/day
Transmissivity = 4.10847 ft2/day
0
10
20
30
40
Adjusted Time (minutes)
Project Number 09284 for SCDHEC

Data from file: C:\G\SLUGTE~1\OFFRAM~1\ORAMPMW7.SLG
Title: Slugtest
Site Name: Off Ramp #83
Location: 274 S. Sutton Rd. Fort Mill, SC
Client: SCDHEC
Project Number: 09284
Test Date: 2/15/01
Well Number: MW-7
Casing Radius: 1 inches
Effective Well Radius: 2 inches
Aquifer Thickness: 50 feet
Water Table to Screen Botto 3.02 feet
Screen Length: 5 feet
Static Water Level: 3.02 decimal feet
K ratio is not entered
There are 59 time and drawdown measurements
Tests starts with trial 4
Time values will be adjusted by 0.584706 days (50518.599129 seconds)

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	0.584675	-3.09944e-05	3.02	5.86653e-07	3.20575e-07
2	0.584682	-2.40207e-05	1.85	1.17	0.639343
3	0.584694	-1.19805e-05	1.85	1.17	0.639343
4	0.584706	0	1.19	1.83	1
5	0.584716	1.00136e-05	1.26	1.76	0.961747
6	0.584729	2.30074e-05	1.21	1.81	0.989071
7	0.584741	3.49879e-05	1.22	1.8	0.983605
8	0.584752	4.60148e-05	1.22	1.8	0.983605
9	0.584763	5.6982e-05	1.22	1.8	0.983605
10	0.584775	6.89626e-05	1.25	1.77	0.967212
11	0.584787	8.10027e-05	1.21	1.81	0.989071
12	0.584845	0.000138998	1.26	1.76	0.961747
13	0.584903	0.000196993	1.26	1.76	0.961747
14	0.584961	0.000254989	1.27	1.75	0.956283
15	0.585019	0.000312984	1.27	1.75	0.956283
16	0.585076	0.000369966	1.28	1.74	0.950818
17	0.585134	0.000428021	1.29	1.73	0.945354
18	0.585192	0.000486016	1.29	1.73	0.945354
19	0.58525	0.000544012	1.3	1.72	0.93989
20	0.585308	0.000602007	1.3	1.72	0.93989
21	0.585367	0.000661016	1.31	1.71	0.934425
22	0.585481	0.00077498	1.31	1.71	0.934425
23	0.585597	0.00089097	1.33	1.69	0.923496
24	0.585713	0.00100702	1.34	1.68	0.918032
25	0.585829	0.00112301	1.34	1.68	0.918032
26	0.585944	0.00123799	1.35	1.67	0.912568
27	0.58606	0.00135398	1.36	1.66	0.907103
28	0.586176	0.00146997	1.38	1.64	0.896174
29	0.586292	0.00158602	1.39	1.63	0.89071
30	0.586407	0.001701	1.4	1.62	0.885246
31	0.586524	0.001818	1.4	1.62	0.885246
32	0.58687	0.00216401	1.43	1.59	0.868852
33	0.587218	0.00251198	1.46	1.56	0.852459
34	0.587565	0.002859	1.48	1.54	0.84153
35	0.587912	0.00320601	1.52	1.5	0.819671
36	0.588259	0.00355297	1.54	1.48	0.808742
37	0.588606	0.00389999	1.56	1.46	0.797813
38	0.588954	0.00424796	1.59	1.43	0.78142
39	0.589301	0.00459498	1.62	1.4	0.765027
40	0.589648	0.004942	1.65	1.37	0.748633
41	0.589997	0.00529099	1.68	1.34	0.73224
42	0.59069	0.00598401	1.73	1.29	0.704918
43	0.591384	0.00667799	1.79	1.23	0.67213

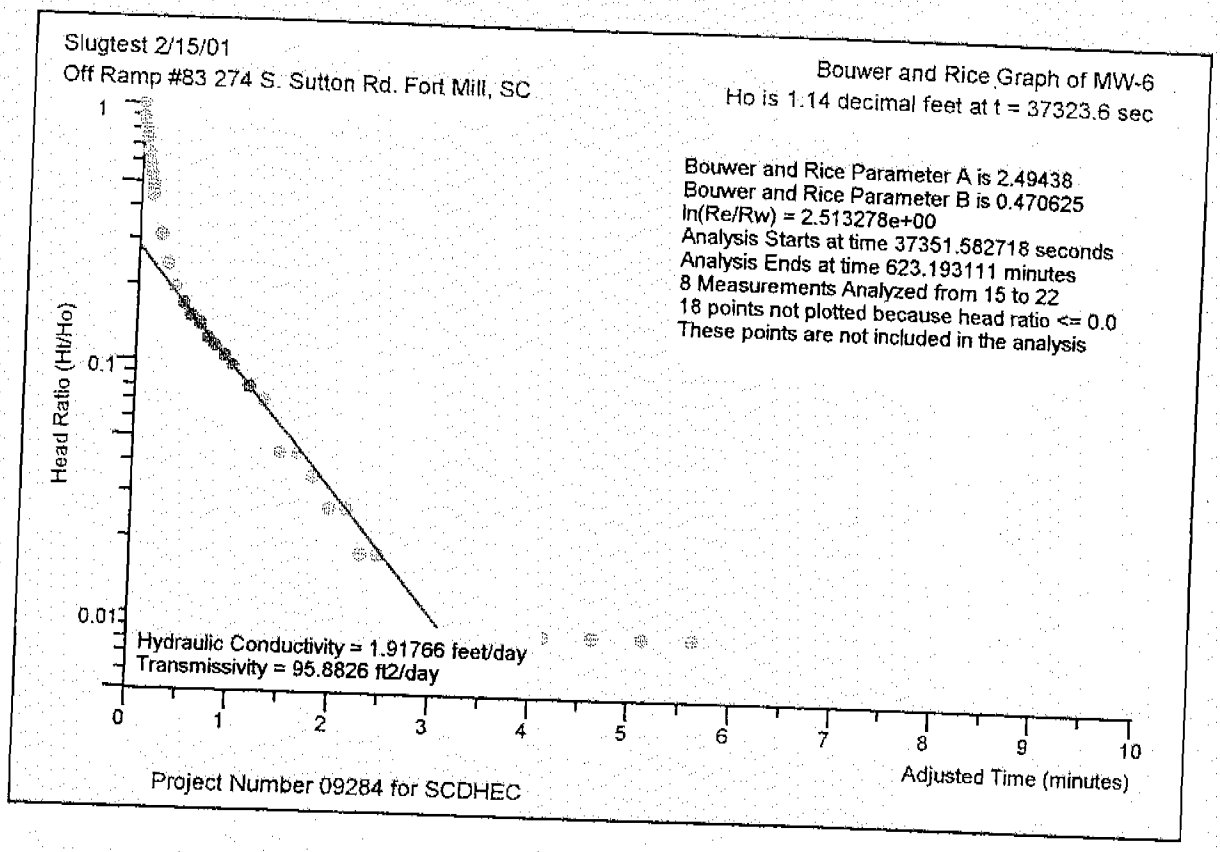
Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
44	0.592079	0.00737298	1.83	1.19	0.650272
45	0.592773	0.00806701	1.88	1.14	0.62295
46	0.593468	0.008762	1.94	1.08	0.590164
47	0.594162	0.00945598	1.99	1.03	0.562842
48	0.594856	0.01015	2.05	0.969999	0.530053
49	0.595551	0.010845	2.1	0.919999	0.502731
50	0.596245	0.011539	2.15	0.87	0.475409
51	0.596941	0.012235	2.2	0.820001	0.448087
52	0.598329	0.013623	2.31	0.710002	0.387979
53	0.599718	0.015012	2.41	0.61	0.333333
54	0.601106	0.0164	2.51	0.510001	0.278689
55	0.602495	0.017789	2.62	0.399999	0.218579
56	0.603884	0.019178	2.72	0.3	0.163934
57	0.605273	0.020567	2.82	0.200001	0.10929
58	0.606662	0.021956	2.92	0.0999995	0.0546445
59	0.608051	0.023345	3.02	5.86653e-07	3.20575e-07


Slugtest 2/15/01
Off Ramp #83 274 S. Sutton Rd. Fort Mill, SC
Bouwer and Rice Graph of MW-5
Ho is 1.19001 decimal feet at t = 47159.6 sec
Head Ratio (Ht/Ho)
1
0.1
0.01
Bouwer and Rice Parameter A is 2.64462
Bouwer and Rice Parameter B is 0.492088
ln(Re/Rw) = 2.553248e+00
Analysis Starts at time 47435.584831 seconds
Analysis Ends at time 801.593313 minutes
15 Measurements Analyzed from 35 to 49
Hydraulic Conductivity = 0.0357071 feet/day
Transmissivity = 1.78535 ft2/day
0
10
20
30
40
Adjusted Time (minutes)
Project Number 09284 for SCDHEC

Data from file: C:\GI\SLUGTE~1\OFFRAM~1\ORAMPMW5.SLG
Title: Slugtest
Site Name: Off Ramp #83
Location: 274 S. Sutton Rd. Fort Mill, SC
Client: SCDHEC
Project Number: 09284
Test Date: 2/15/01
Well Number: MW-5
Casing Radius: 1 inches
Effective Well Radius: 2 inches
Aquifer Thickness: 50 feet
Water Table to Screen Bottom: 6.37 feet
Screen Length: 10 feet
Static Water Level: 6.37 decimal feet
K ratio is not entered
There are 61 time and drawdown measurements
Tests starts with trial 5
Time values will be adjusted by 0.545829 days (47159.625435 seconds)

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	0.545777	-5.19753e-05	6.37	-1.17331e-06	-9.85962e-07
2	0.545794	-3.49879e-05	6.36	0.0100052	0.00840763
3	0.545806	-2.30074e-05	6.37	-1.17331e-06	-9.85962e-07
4	0.545817	-1.19805e-05	5.62001	0.749989	0.630238
5	0.545829	0	5.17999	1.19001	1
6	0.54584	1.10269e-05	5.2	1.17	0.983182
7	0.545852	2.30074e-05	5.19	1.18	0.991591
8	0.545862	3.3021e-05	5.2	1.17	0.983182
9	0.545875	4.60148e-05	5.21001	1.15999	0.974774
10	0.545887	5.79953e-05	5.22002	1.14998	0.966365
11	0.545899	6.99759e-05	5.22999	1.14001	0.957984
12	0.545956	0.000127017	5.24	1.13	0.949575
13	0.546014	0.000185013	5.24	1.13	0.949575
14	0.546072	0.000243008	5.25	1.12	0.941167
15	0.54613	0.000301003	5.25	1.12	0.941167
16	0.546188	0.000358999	5.25	1.12	0.941167
17	0.546245	0.000415981	5.26001	1.10999	0.932758
18	0.546303	0.000473976	5.26001	1.10999	0.932758
19	0.546361	0.000532031	5.26001	1.10999	0.932758
20	0.546419	0.000590026	5.27001	1.09999	0.924349
21	0.546478	0.000648975	5.27001	1.09999	0.924349
22	0.546593	0.000764012	5.27999	1.09001	0.915968
23	0.546708	0.00087899	5.27999	1.09001	0.915968
24	0.546824	0.00099498	5.3	1.07	0.899151
25	0.54694	0.00111103	5.3	1.07	0.899151
26	0.547056	0.00122702	5.3	1.07	0.899151
27	0.547171	0.001342	5.31001	1.05999	0.890742
28	0.547287	0.00145799	5.32001	1.04999	0.882333
29	0.547403	0.00157398	5.32001	1.04999	0.882333
30	0.547519	0.00169003	5.32999	1.04001	0.873952
31	0.547635	0.00180602	5.32999	1.04001	0.873952
32	0.547981	0.00215203	5.33999	1.03001	0.865543
33	0.548329	0.0025	5.36001	1.00999	0.848726
34	0.548676	0.00284702	5.36001	1.00999	0.848726
35	0.549023	0.00319397	5.37999	0.990013	0.831936
36	0.54937	0.00354099	5.4	0.97	0.815119
37	0.549718	0.00388902	5.41001	0.959994	0.80671
38	0.550065	0.00423598	5.42001	0.949987	0.798301
39	0.550412	0.004583	5.45	0.920001	0.773103
40	0.550759	0.00493002	5.46001	0.909994	0.764694
41	0.551108	0.005279	5.47001	0.899988	0.756286
42	0.551801	0.00597203	5.48999	0.880008	0.739496
43	0.552495	0.006666	5.51001	0.859995	0.722678

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
44	0.55319	0.00736099	5.52999	0.840015	0.705888
45	0.553884	0.00805503	5.55	0.820002	0.689071
46	0.554579	0.00875002	5.58999	0.780009	0.655464
47	0.555273	0.009444	5.6	0.770002	0.647055
48	0.555968	0.010139	5.62998	0.740016	0.621857
49	0.556662	0.010833	5.63999	0.73001	0.613448
50	0.557356	0.011527	5.66	0.709997	0.59663
51	0.558052	0.012223	5.67998	0.690017	0.579841
52	0.55944	0.013611	5.72001	0.649991	0.546206
53	0.560829	0.015	5.75	0.620004	0.521007
54	0.562218	0.016389	5.78002	0.589985	0.495781
55	0.563606	0.017777	5.8	0.570005	0.478991
56	0.564995	0.019166	5.83999	0.530012	0.445384
57	0.566384	0.020555	5.86	0.509999	0.428567
58	0.567773	0.021944	5.88001	0.489986	0.411749
59	0.569162	0.023333	5.89999	0.470006	0.39496
60	0.570551	0.024722	5.92001	0.449993	0.378142
61	0.571941	0.026112	5.93999	0.430013	0.361353


Slugtest 2/15/01
Off Ramp #83 274 S. Sutton Rd. Fort Mill, SC
Bouwer and Rice Graph of MW-6
Ho is 1.14 decimal feet at t = 37323.6 sec
Bouwer and Rice Parameter A is 2.49438
Bouwer and Rice Parameter B is 0.470625
ln(Re/Rw) = 2.513278e+00
Analysis Starts at time 37351.582718 seconds
Analysis Ends at time 623.193111 minutes
8 Measurements Analyzed from 15 to 22
18 points not plotted because head ratio <= 0.0
These points are not included in the analysis
Head Ratio (Ht/Ho)
1
0.1
0.01
Hydraulic Conductivity = 1.91766 feet/day
Transmissivity = 95.8826 ft2/day
0
1
2
3
4
5
6
7
8
9
10
Adjusted Time (minutes)
Project Number 09284 for SCDHEC

Data from file: C:\G\SLUGTE~1\OFFRAM~1\ORAMPMW6.SLG
Title: Slugtest
Site Name: Off Ramp #83
Location: 274 S. Sutton Rd. Fort Mill, SC
Client: SCDHEC
Project Number: 09284
Test Date: 2/15/01
Well Number: MW-6
Casing Radius: 1 inches
Effective Well Radius: 2 inches
Aquifer Thickness: 50 feet
Water Table to Screen Botto 5.63 feet
Screen Length: 10 feet
Static Water Level: 5.63 decimal feet
K ratio is not entered
There are 55 time and drawdown measurements
Tests starts with trial 3
Time values will be adjusted by 0.431986 days (37323.590755 seconds)

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
1	0.431958	-2.80142e-05	5.63	0	0
2	0.431975	-1.09971e-05	5.06	0.57	0.5
3	0.431986	0	4.49	1.14	1
4	0.431998	1.20103e-05	4.62	1.01	0.885965
5	0.432009	2.30074e-05	4.71	0.92	0.807017
6	0.432021	3.49879e-05	4.8	0.83	0.72807
7	0.432031	4.50015e-05	4.89	0.74	0.649123
8	0.432044	5.79953e-05	4.96	0.67	0.587719
9	0.432056	7.00057e-05	5.02	0.61	0.535088
10	0.432067	8.10027e-05	5.08	0.55	0.482456
11	0.432079	9.29832e-05	5.13	0.5	0.438596
12	0.432137	0.000151008	5.28	0.35	0.307017
13	0.432194	0.00020799	5.36	0.27	0.236842
14	0.432252	0.000265986	5.41	0.22	0.192982
15	0.43231	0.000323981	5.44	0.19	0.166667
16	0.432368	0.000382006	5.46	0.17	0.149123
17	0.432426	0.000440001	5.47	0.16	0.140351
18	0.432484	0.000497997	5.49	0.14	0.122807
19	0.432542	0.000555992	5.5	0.13	0.114035
20	0.4326	0.000613987	5.51	0.12	0.105263
21	0.432659	0.000672996	5.52	0.11	0.096491
22	0.432773	0.00078699	5.54	0.09	0.0789473
23	0.432889	0.00090301	5.55	0.0799999	0.0701753
24	0.433005	0.001019	5.58	0.05	0.0438597
25	0.43312	0.00113401	5.58	0.05	0.0438597
26	0.433236	0.00125	5.59	0.0399999	0.0350877
27	0.433352	0.00136599	5.6	0.0299999	0.0263157
28	0.433468	0.00148201	5.6	0.0299999	0.0263157
29	0.433583	0.00159699	5.61	0.0199998	0.0175437
30	0.433699	0.00171301	5.61	0.0199998	0.0175437
31	0.433816	0.00182998	5.62	0.0100001	0.008772
32	0.434162	0.00217599	5.62	0.0100001	0.008772
33	0.434509	0.00252301	5.62	0.0100001	0.008772
34	0.434856	0.00286999	5.62	0.0100001	0.008772
35	0.435204	0.003218	5.62	0.0100001	0.008772
36	0.435551	0.00356498	5.62	0.0100001	0.008772
37	0.435898	0.003912	5.62	0.0100001	0.008772
38	0.436245	0.00425899	5.63	-3.91102e-07	-3.43072e-07
39	0.436593	0.00460699	5.63	-3.91102e-07	-3.43072e-07
40	0.43694	0.00495401	5.63	-3.91102e-07	-3.43072e-07
41	0.437288	0.00530198	5.63	-3.91102e-07	-3.43072e-07
42	0.437981	0.00599501	5.63	-3.91102e-07	-3.43072e-07
43	0.438676	0.00669	5.63	-3.91102e-07	-3.43072e-07

Trial	Time (days)	Adjusted Time (days)	Drawdown (decimal feet)	Head (decimal feet)	Head Ratio
44	0.43937	0.007384	5.63	-3.91102e-07	-3.43072e-07
45	0.440065	0.00807899	5.63	-3.91102e-07	-3.43072e-07
46	0.440759	0.008773	5.63	-3.91102e-07	-3.43072e-07
47	0.441454	0.00946799	5.63	-3.91102e-07	-3.43072e-07
48	0.442148	0.010162	5.63	-3.91102e-07	-3.43072e-07
49	0.442843	0.010857	5.63	-3.91102e-07	-3.43072e-07
50	0.443537	0.011551	5.63	-3.91102e-07	-3.43072e-07
51	0.444233	0.012247	5.63	-3.91102e-07	-3.43072e-07
52	0.44562	0.013634	5.63	-3.91102e-07	-3.43072e-07
53	0.447009	0.015023	5.63	-3.91102e-07	-3.43072e-07
54	0.448398	0.016412	5.63	-3.91102e-07	-3.43072e-07
55	0.449787	0.017801	5.63	-3.91102e-07	-3.43072e-07

Jordan Jones & Goulding

PROJECT NUMBER: 09284 PAGE: ____ OF: ____

PROJECT NAME: Off-Ramp 83 SLA BY: ____ DATE: ____

SUBJECT: Conductivity Calculations CHK'D: ____ DATE: ____

1- Average of Slug Tests

Well 1A / 9.5×10^{-4}

Well 1B / 9.7×10^{-4}

Well 4A / 1.0×10^{-3}

Well 4B / 8.7×10^{-4}

$\bar{K} = 3.7 \times 10^{-3} / 4$

$\bar{K} = 9.4 \times 10^{-4}$ ft/min

2- Horizontal Gradient

$\Delta h / \Delta l \quad 0.5 / 20 = 0.025$ ft/ft

3- Linear Flow Velocity

$V = \frac{K}{N} \cdot \frac{\Delta h}{\Delta l}$

$= \frac{9.4 \times 10^{-4} \times 0.025}{0.3}$

$= 7.8 \times 10^{-5}$ ft/min $\times$ 1440

$= 0.113$ ft/day

$= 41.3$ ft/year

SLUG TEST B STATIC WATER LEVEL WELL 4 19.11

TIME		DRAWDOWN	ΔH
T sec / T min		DTW	
5	.083	19.90	0.79
10	.16	19.89	0.78
15	.25	19.87	0.76
20	.33	19.85	0.74
25	.45	19.83	0.72
30	.50	19.80	0.69
35	.58	19.77	0.66
40	.66	19.74	0.63
45	.75	19.70	0.59
50	.83	19.65	0.54
55	.91	19.60	0.49
60	1.0	19.55	0.44
120	2.0	19.29	0.18

SLUG TEST A STATIC WATER LEVEL WELL 4 18.72

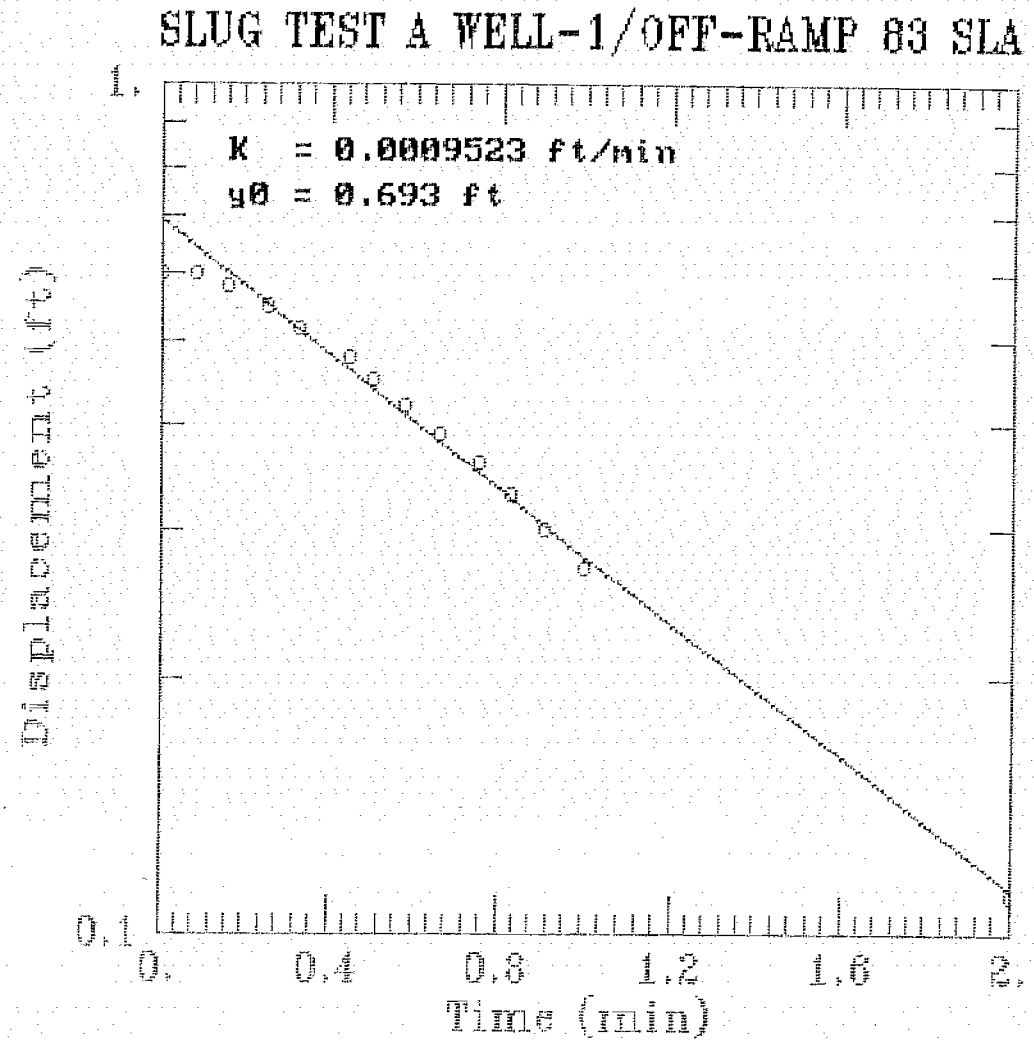
TIME		DRAWDOWN	ΔH
T sec / T min		DTW	
5	.083	19.42	0.70
10	.16	19.40	0.68
15	.25	19.37	0.65
20	.33	19.34	0.62
25	.45	19.31	0.59
30	.50	19.28	0.56
35	.58	19.25	0.53
40	.66	19.21	0.49
45	.75	19.19	0.47
50	.83	19.16	0.44
55	.91	19.13	0.41
60	1.0	19.10	0.38
120	2.0	18.83	0.11

SLUG TEST A STATIC WATER LEVEL WELL 1 21.83

TIME		DRAWDOWN	ΔH
T sec / T min		DTW	
5	.083	22.43	0.6
10	.16	22.41	0.58
15	.25	22.38	0.55
20	.33	22.35	0.52
25	.45	22.31	0.48
30	.50	22.28	0.45
35	.58	22.25	0.42
40	.66	22.22	0.39
45	.75	22.19	0.36
50	.83	22.16	0.33
55	.91	22.13	0.30
60	1.0	22.10	0.27
120	2.0	21.94	0.11

SLUG TEST B STATIC WATER LEVEL WELL 1 21.93

TIME		DRAWDOWN	ΔH
T sec / T min		DTW	
5	.083	22.52	0.59
10	.16	22.49	0.56
15	.25	22.47	0.54
20	.33	22.44	0.51
25	.45	22.42	0.49
30	.50	22.39	0.46
35	.58	22.36	0.43
40	.66	22.33	0.40
45	.75	22.30	0.37
50	.83	22.27	0.34
55	.91	22.24	0.31
60	1.0	22.21	0.28
120	2.0	22.03	0.10



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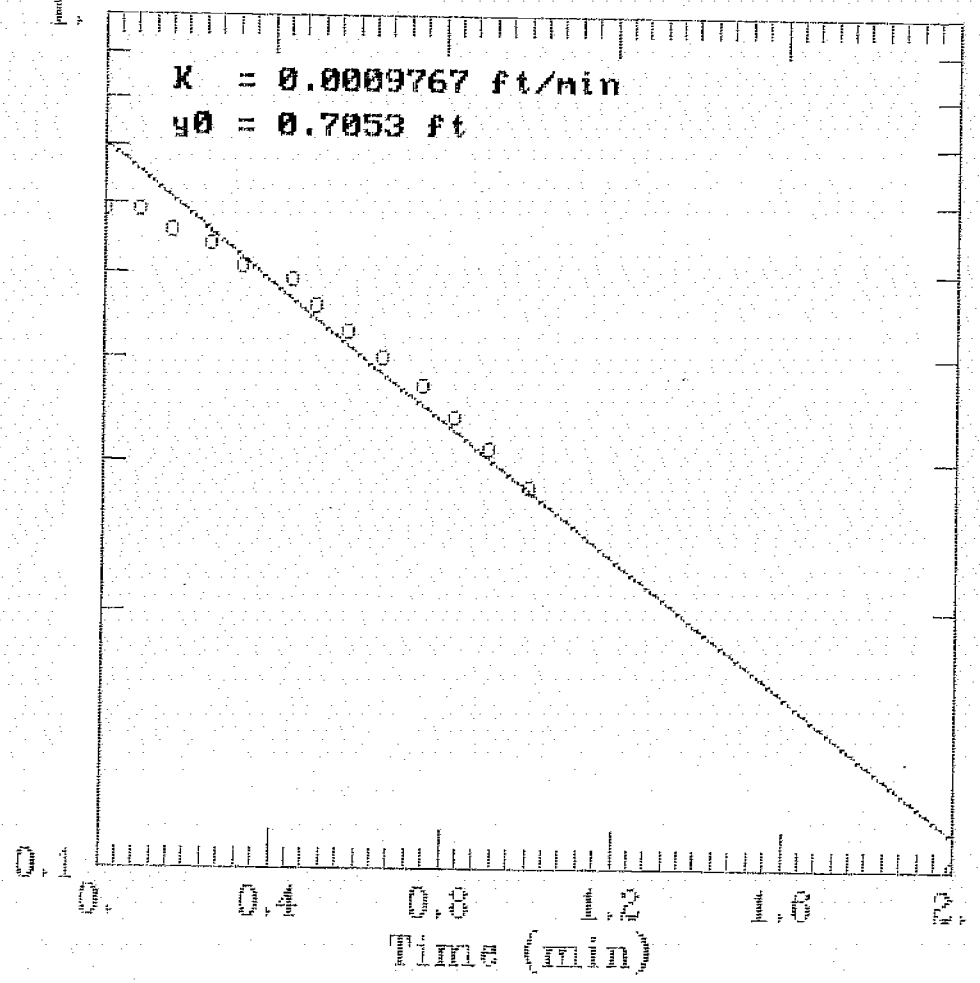
SLUG TEST B WELL-1/OFF-RAMP 83 SLA



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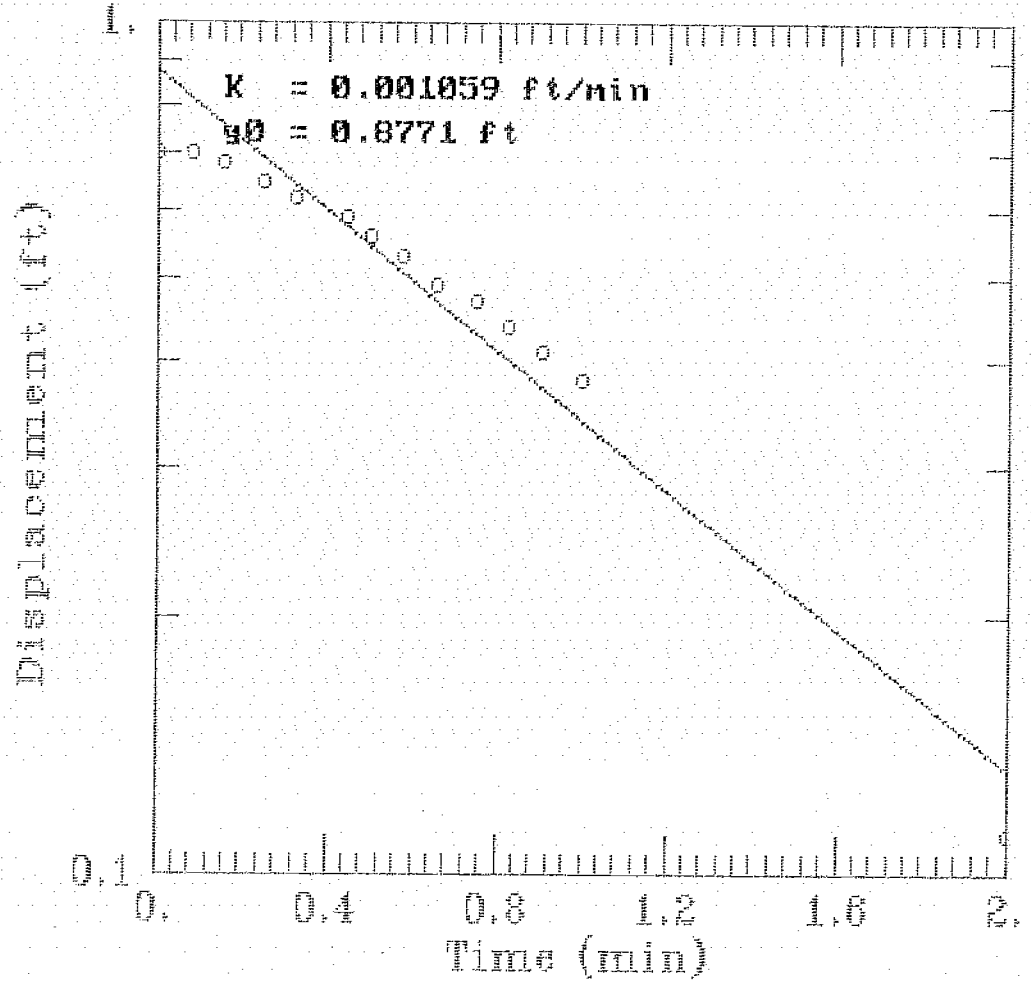
SCDHEC
IFB-32624-12/4/07-EMW
Page: 62

SLUG TEST A WELL-4/OFF-RAMP 83 SLA



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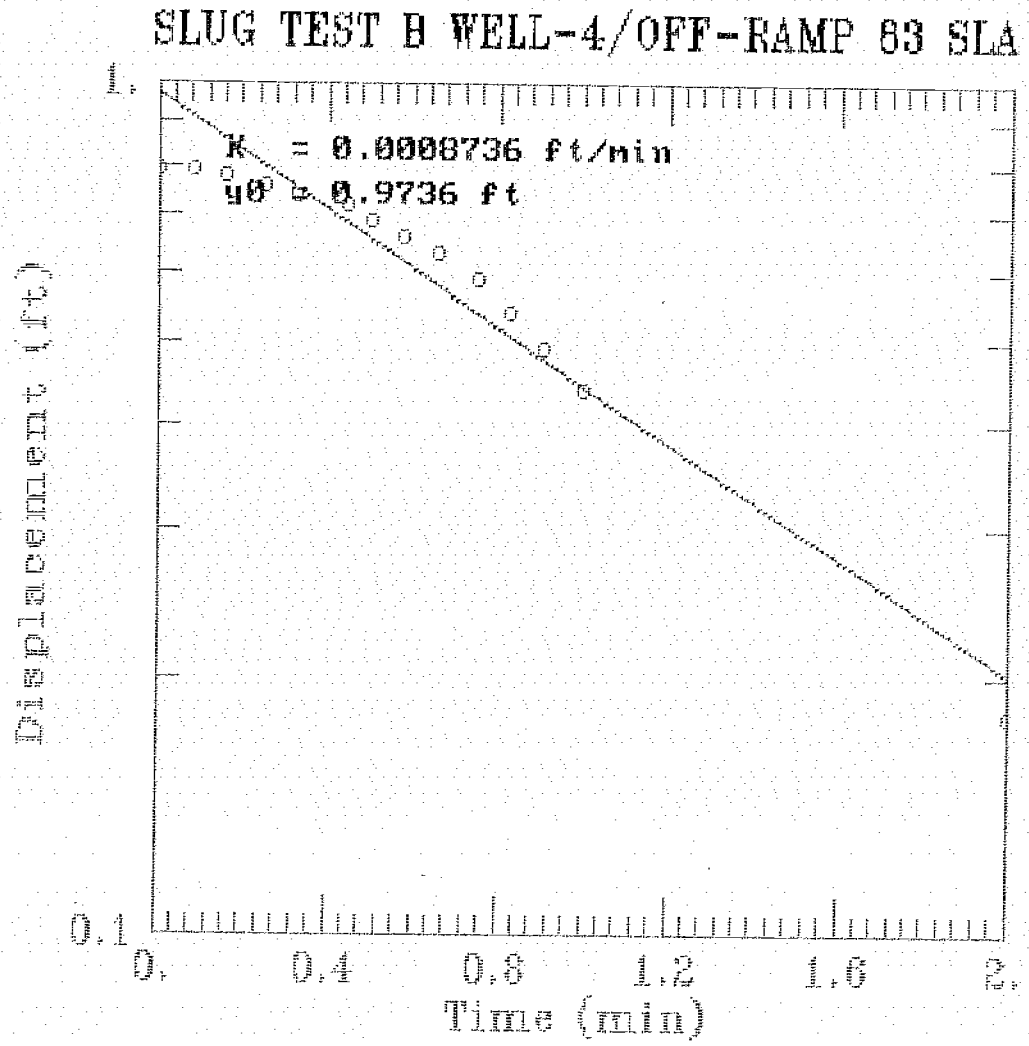

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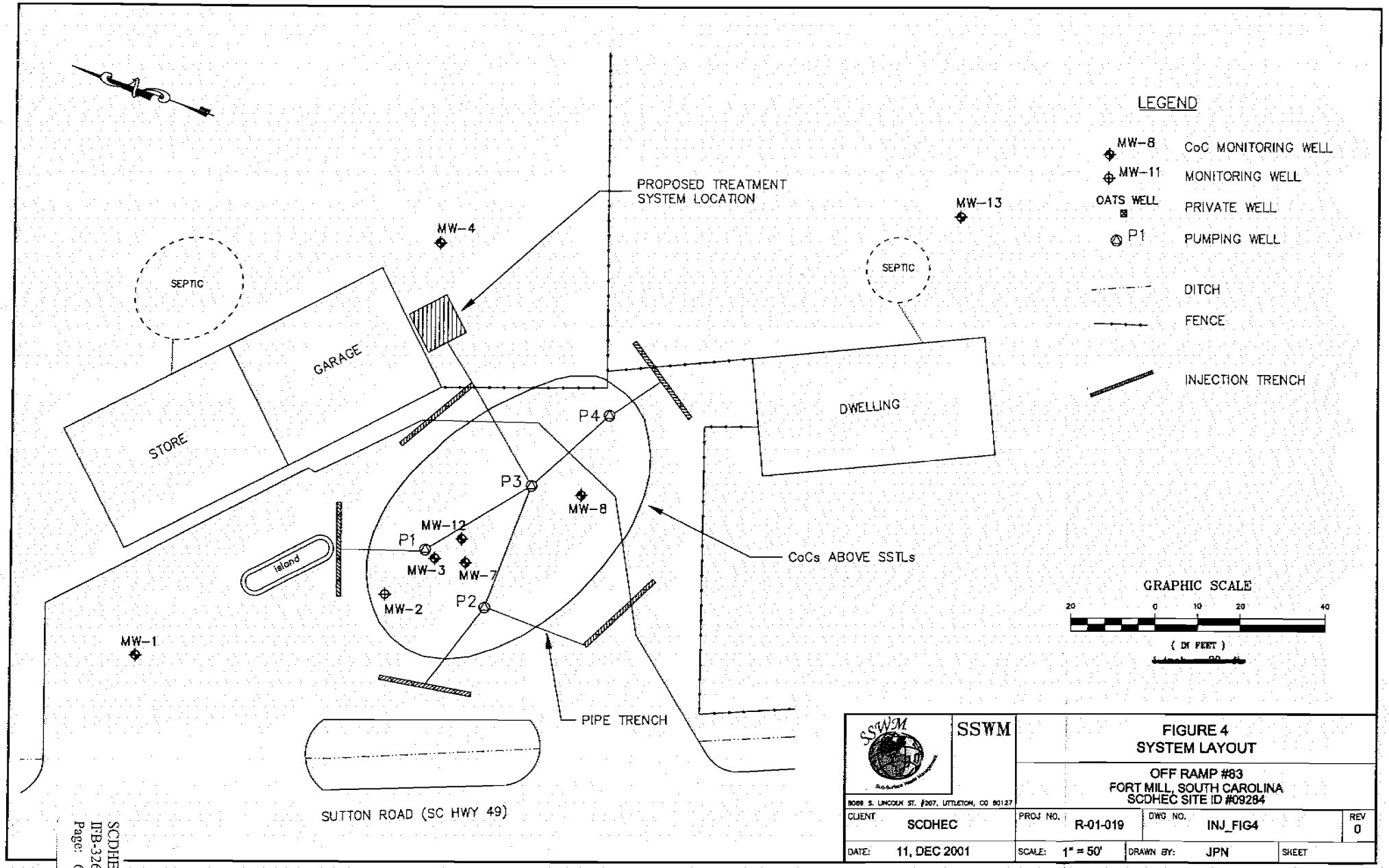
Modeling Group

Former Corrective Action System Information



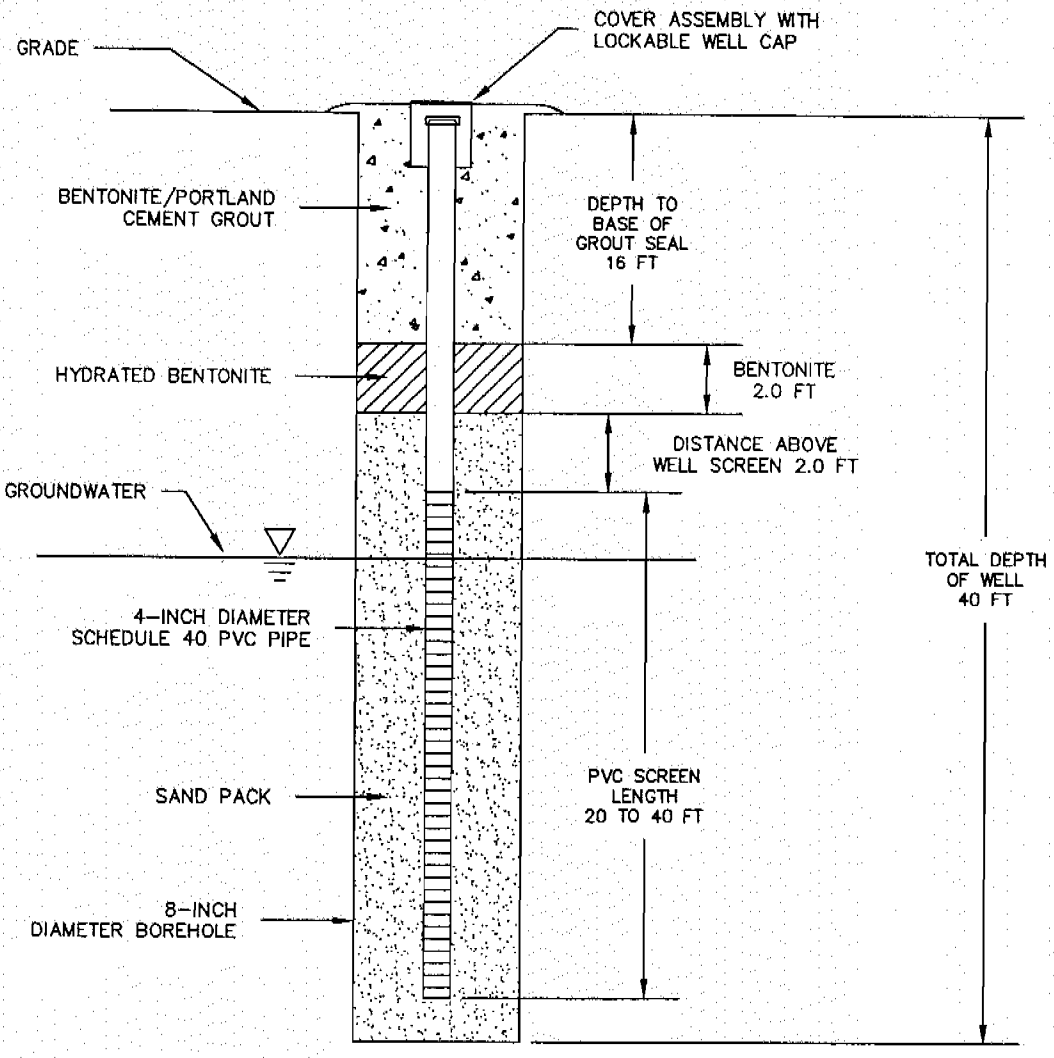
SSWM

8089 S. LINCOLN ST. #207, LITTLETON, CO 80127

FIGURE 4
SYSTEM LAYOUT

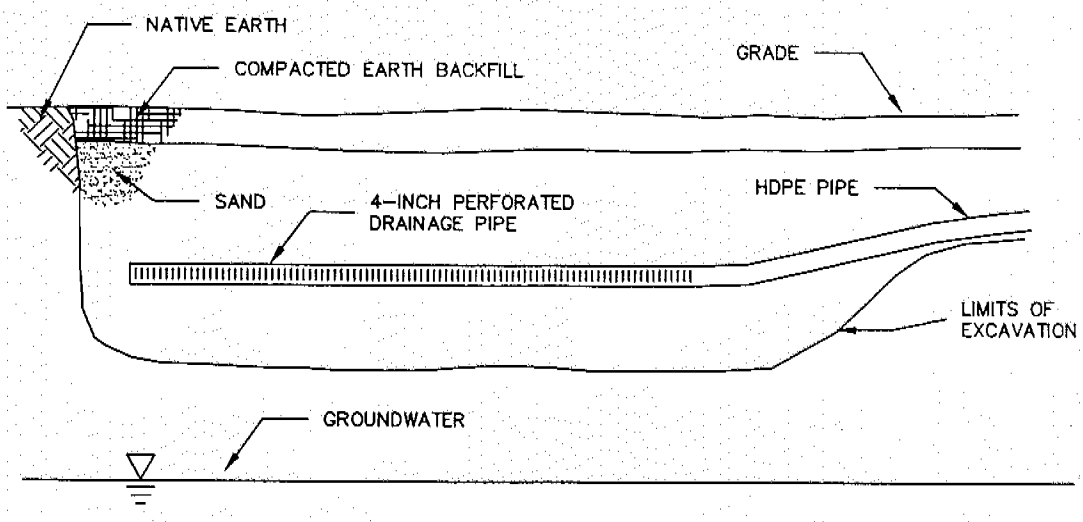
OFF RAMP #83
FORT MILL, SOUTH CAROLINA
SCDHEC SITE ID #09284

CLIENT	PROJ NO.	DWG NO.	REV
SCDHEC	R-01-019	INJ_FIG4	0
DATE: 11, DEC 2001	SCALE: 1" = 50'	DRAWN BY: JPN	SHEET

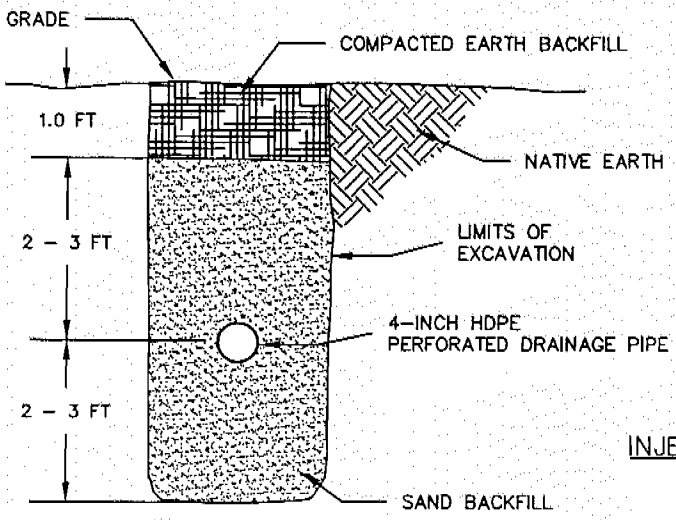


SSWM Sub-Surface Waste Management 8089 S. LINCOLN ST. #207 LITTLETON, CO 80127	TYPICAL EXTRACTION WELL DIAGRAM OFF RAMP #83 FORT MILL, SOUTH CAROLINA SCDHEC SITE ID # 09284
FIGURE 1	DWG NO.: INJ_FIG1
DATE: 13, DEC 2001	DRAWN BY: JPN

REV 0

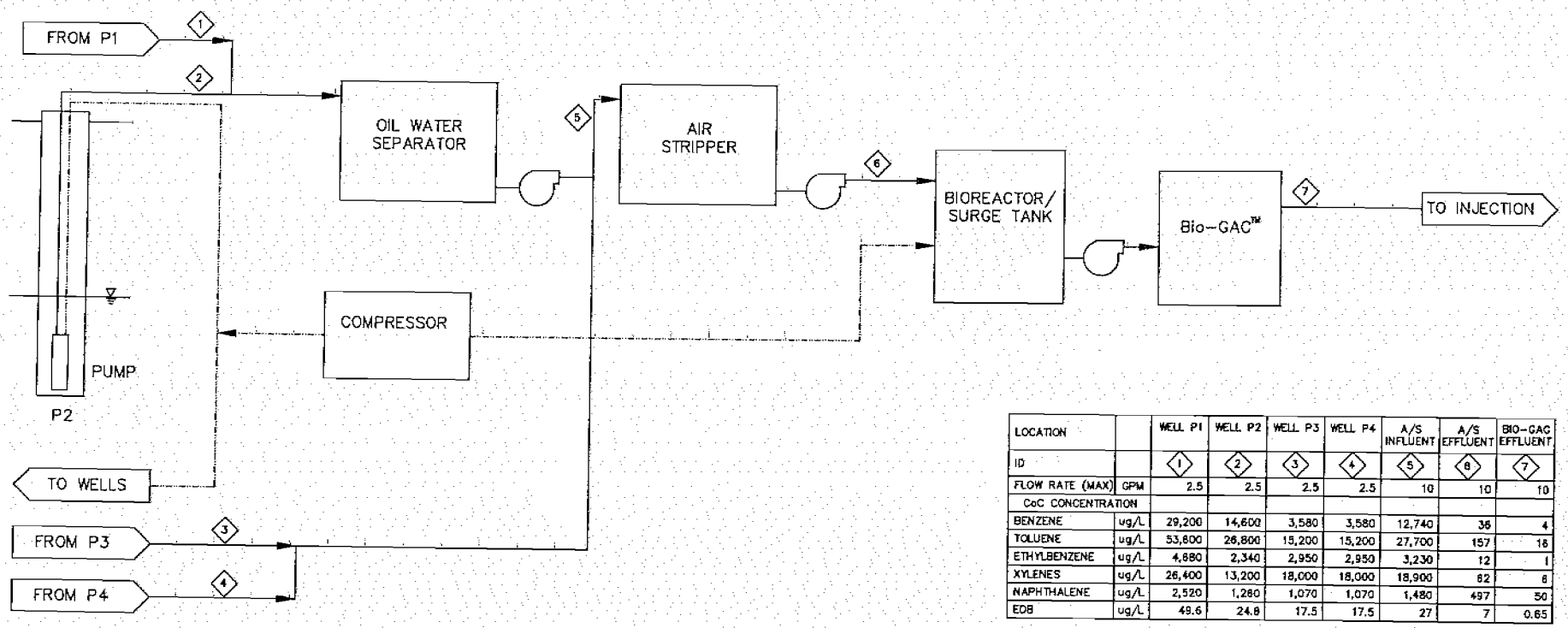


INJECTION TRENCH ELEVATION
(TYPICAL)



INJECTION TRENCH CROSS SECTION
(TYPICAL)

SSWM Sub-Surface Waste Management 8089 S. LINCOLN ST. #207 LITTLETON, CO 80127	TYPICAL INJECTION TRENCH DIAGRAM OFF RAMP #83 FORT MILL, SOUTH CAROLINA SCDHEC SITE ID # 09284	
FIGURE 2	DWG NO.: INJ_FIG2	REV 0
DATE: 13, DEC 2001	DRAWN BY: JPN	



LOCATION		WELL P1	WELL P2	WELL P3	WELL P4	A/S INFLUENT	A/S EFFLUENT	BIO-GAC EFFLUENT
ID		1	2	3	4	5	6	7
FLOW RATE (MAX)	GPM	2.5	2.5	2.5	2.5	10	10	10
CoC CONCENTRATION								
BENZENE	ug/L	29,200	14,600	3,580	3,580	12,740	36	4
TOLUENE	ug/L	53,600	26,800	15,200	15,200	27,700	157	16
ETHYLBENZENE	ug/L	4,680	2,340	2,950	2,950	3,230	12	1
XYLENES	ug/L	26,400	13,200	18,000	18,000	18,900	62	6
NAPHTHALENE	ug/L	2,520	1,260	1,070	1,070	1,480	497	50
EDB	ug/L	49.6	24.8	17.5	17.5	27	7	0.65

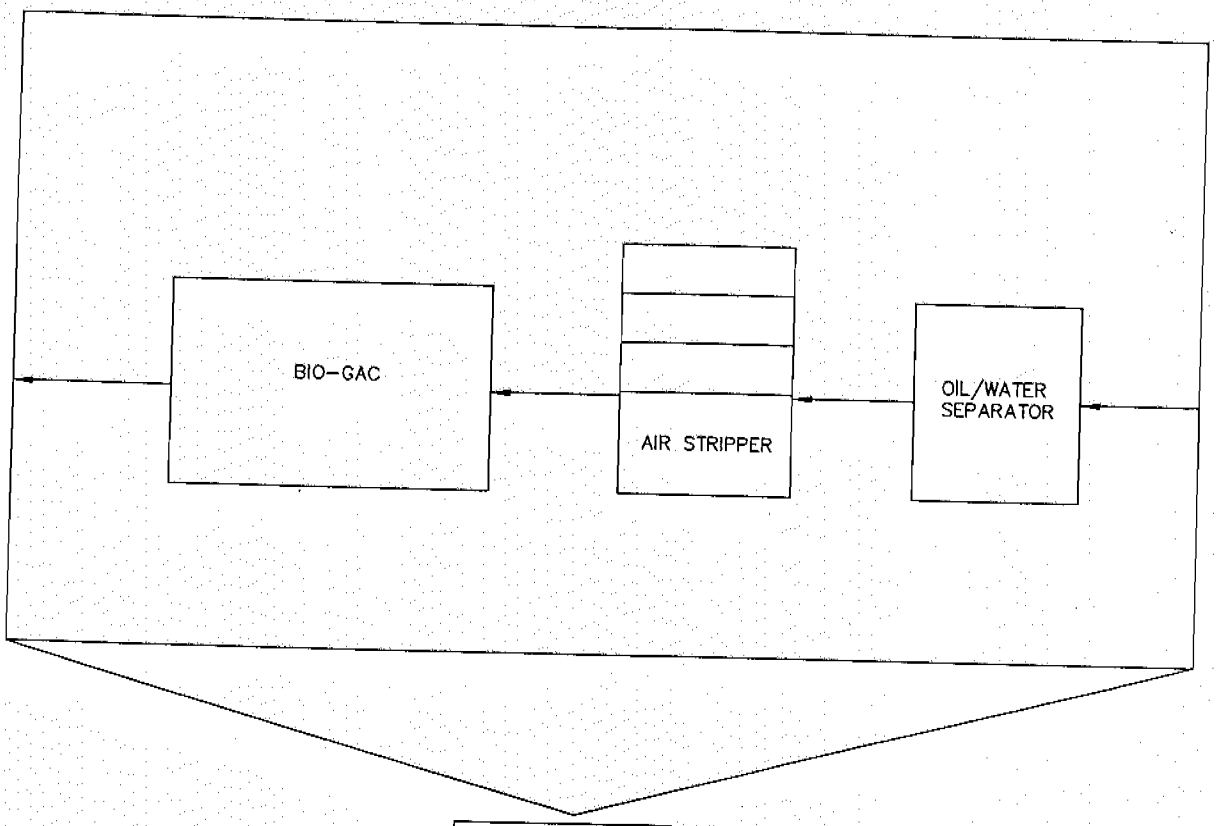
SSWM

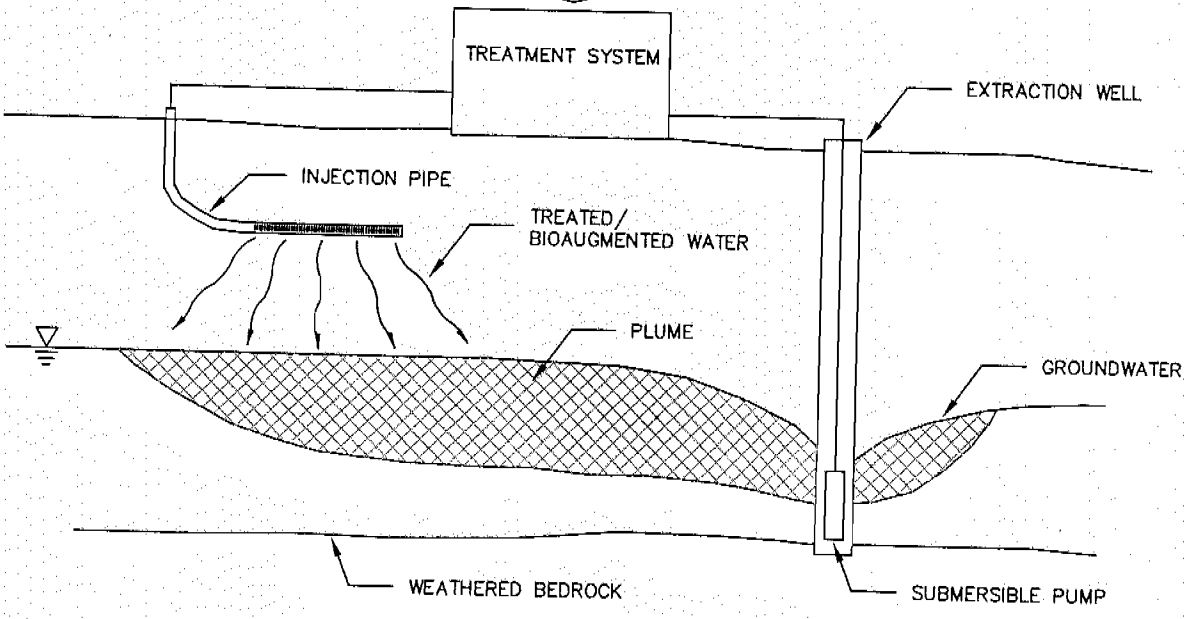
8089 S. LINCOLN ST. #207, LITTLETON, CO 80127

FIGURE 5
PROCESS FLOW DIAGRAM

OFF RAMP #83
FORT MILL, SOUTH CAROLINA
SCDHEC SITE ID #09284

CLIENT	PROJ NO.	DWG NO.	REV
SCDHEC	R-01-027	OFF RAMP PFD	0
DATE: 14, DEC 2001	SCALE: NTS	DRAWN BY: JPN	SHEET





SSWM Sub-Surface Waste Management 8089 S. LINCOLN ST. #207 LITTLETON, CO 80127	SCHEMATIC DIAGRAM OF SYSTEM OFF RAMP #83 FORT MILL, SOUTH CAROLINA SCDHEC SITE ID # 09284	
FIGURE 12	DWG NO.: INJ_FIG12	REV 0
DATE: 14, DEC 2001	DRAWN BY: JPN	